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EDITORIAL COMMENTARY BY GORDON B. LINDSAY, PH.D.

Political Effectiveness and Health Educators

The articles in this issue provide *Focal Points* readers with concrete examples of how legislative and regulatory actions can be put into motion to support health promotion efforts. I appreciate the opportunity to offer an editorial commentary and do so not from the position of the seasoned expert, but from the perspective of a roughed-up practitioner!

During the past 3 years, the Utah Department of Health's Bureau of Health Promotion and Risk Reduction has supported select health-related legislation. The Bureau has supported, and continues to support, initiatives calling for mandatory seatbelt use, infant car seats, higher cigarette taxes, smokeless tobacco warning labels, and school health curricula. Along with a few successes, we have experienced some spectacular failures. Through it all, however, we are beginning to accumulate some political common sense. Based on our experience, I want to offer 10 suggestions that practitioners in the field should consider as they prepare to enter the very important but complex and difficult-to-predict area of legislation.

1. *Know the legislative process.* Most bills must go through a series of committees and subcommittees in both the house and senate. The system appears particularly complex when you are working with the legislature for the first time. Take time to learn the system. Know the exact sequence of events that must take place before your initiative becomes law. Begin this preparation months before the legislative session.

2. *Develop a coalition and select a single coordinator.* Combine the resources of all agencies who wish to see your legislation pass. It is inefficient and ineffective for coalition members to act independently. There should be a coordinator who is on top of the total picture and who keeps the group's efforts on target. Interviews with the media and personal contacts with legislators and those developing educational materials and lobbying efforts should be carefully orchestrated through the coalition and its coordinator. Spokespersons for the cause should be well respected and credible. While commitment to the cause is

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The Minnesota Plan for Nonsmoking and Health

by James M. Shultz, M.S.,[1] and Michael E. Moen, M.P.H.[2]

The Minnesota experience indicates that calculations of the health and economic costs of smoking have strong health policy impact and facilitate passage of smoking control legislation. By coupling epidemiologic and health economic methods, it is possible to estimate smoking-related deaths, disability, and associated health care and lost income costs.[3,4] The figure on page 3 illustrates the direct costs of health problems that were attributable to smoking in Minnesota in 1983. Adapting national cost of illness methods to Minnesota indicates an estimated $375 million (1983 dollars) in direct health care costs due to smoking. Based on calculations of 4,600 premature, smoking-linked deaths annually (14 percent of total statewide mortality), lost future income and productivity were valued at $303 million annually (present-valued 1983 dollars).

These figures are impressive in their absolute magnitude, but they are also useful when converted to common parlance: smoking is the chief, single preventable cause of death; smoking-linked health care costs are equal to 82 cents per pack of cigarettes sold in 1983; lost income costs add an additional 66 cents per pack. With an average 1983 pack price of 92 cents in Minnesota, the disparity of costs to *gross* retail cigarette income is obvious. Cost-benefit analysis that teases apart the components of ciga-

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Editorial Commentary (From page 1)

essential, impassioned outbursts can be disastrous. Controlled persistence is the key. It is preferable that coordinators and most spokespersons not come from official health agencies. However, highly credible, articulate advocates from government agencies are critical at the right time. Keep in mind the lobbying restrictions that may be placed on public employees.

3. *Identify key opinion leaders in the legislature.* Identify the formal and informal leaders in both parties. Also determine who will be on the critical subcommittees. Concentrate your early efforts on these individuals. Select a highly regarded, articulate legislator for your sponsor. This person should have strong personal feelings regarding the initiative and be able to speak with conviction.

4. *Know your facts very well and communicate them simply.* Assume that your position is not well understood. You must be extremely well informed and able to answer any technical question that may be put to the bill's sponsor. Realize, however, that legislators are given an avalanche of technical fact sheets and background papers for hundreds of legislative initiatives. Your sponsor should be familiar with all pertinent issues, but the rest of the legislators simply do not have the time to read a lengthy technical report. They are more likely to read a well-designed, single-page fact sheet made up of "bullets."

Also make sure your supporting coalition cross-checks the content and supervises the distribution of educational materials. It is embarrassing and potentially disastrous when supporting agencies produce fact sheets with conflicting information.

One final note on the matter of communication. The Michigan, Minnesota, and Rhode Island reports in this issue of *Focal Points* all emphasize the importance of using graphic presentations of risk factors and disease prevalence and using cost estimates where possible. The use of good data, presented in an appealing, comprehensible way, can be extremely influential.

5. *Anticipate the counter arguments or objections to your initiative.* It is better if your supporters take the initiative, point out objections, and then balance these concerns against the benefits of the initiative. This preemptory action will deflate the potential impact of the opposition and help those who are undecided to anticipate and resist these counter arguments.

Focal Points is a publication of the Division of Health Education, directed by Marshall W. Kreuter, Ph.D. Your comments are invited and should be addressed to either the Editor or Managing Editor at the addresses below.

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6. *Concentrate efforts on the undecided votes.* For any legislative issue, representatives can be divided into three categories: supporters, opponents, and those who are undecided. Do not spend all your time arguing with the opposition; our experience suggests that, regardless of how logical your position is, you have little chance of influencing a representative who is suffering from "hardening of the categories." Too often these confrontations can hurt you by adding fuel to existing hostilities. Concentrate your efforts on the representatives who are undecided. They usually hold the balance. Keep an ongoing tally of who is in what category.

7. *Encourage local contacts.* Successful lobbying requires creating a blend of light and heat. Light is the education you provide. Heat is pressure generated by vocal public support for an initiative. Enlist the help of participating coalition agencies in personally contacting and telephoning legislators. These contacts and calls are most effective when they come from actual constituents. Make these contacts before or between legislative sessions and be brief – representatives are busy people.

8. *Utilize the news media.* Generate mass support for your initiative by orchestrating media events. Carefully sequence your media programs. You may want to bring in an out-of-state authority and sponsor a luncheon. Set up press conferences. Newspapers and radio and television stations are looking for issues and stories.

If you are certain your issue has public support, conduct a public opinion poll. It is a good idea to test alternative questions. The wording of a question can dramatically influence the results of a public opinion poll. After you have settled on a good question, have the official poll conducted by a known, reputable pollster. Local newspapers are often willing to bear the cost of such surveys.

9. *Don't forget the executive branch.* Our effort to pass a higher cigarette excise tax failed. We attribute that loss more to the posture of the executive office than to legislative opposition. Gubernatorial endorsement or opposition can greatly enhance or hinder your efforts in the legislature. Remember that one person's vote can undo months of your best efforts. Educate and lobby the governor long before the legislative session. His or her support is vital. Never lose sight of the fact that your business is health and their's, politics; as a result you are playing *their* game, not vice versa!

10. *Be patient.* Successful passage of a bill consists of the following phases: (1) education, (2) agitation, (3) incubation, and (4) legislation. Remember that you are trying to create change in a system designed to remain stable; be patient and do not look for immediate success. For example, our first effort to pass a mandatory child restraint law was unsuccessful. As a result, some of us felt our work had been in vain, but the more senior members of the coalition reminded us that temporary setbacks are the norm and cautioned us not to be impatient. One year later during a 2-month budget session, the same bill sailed through.

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Our educational efforts needed that incubation time.

While political activity can be very frustrating, there can be no denying that it is essential for contemporary health promotion programs. In any case, regardless of how troubling we may find the political waters, health education practitioners must dive in; we will all be safer by heeding the messages shared by the authors in this issue of *Focal Points*. ⊕

For further information, contact: Gordon B. Lindsay, Ph.D., Risk Reduction Coordinator, The Utah Department of Health, 825 North 300 West, P. O. Box 45500, Salt Lake City, UT 84145-0500.

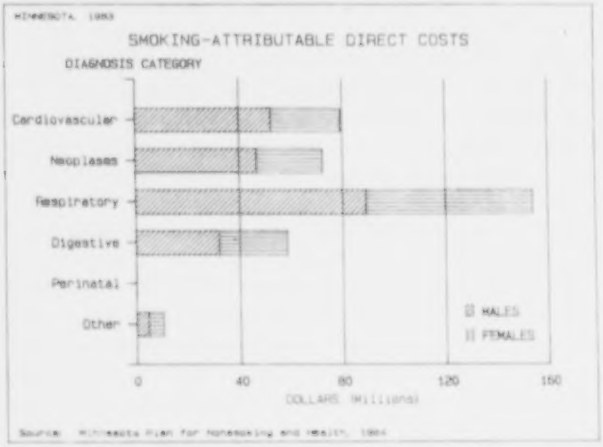
The Minnesota Plan (From page 1)

rette price indicates an even greater discrepancy between smoking-induced costs and real economic benefits to the State.

These simple summary figures, which belie the complexity of the underlying calculations, were used liberally in testimony before the Minnesota Legislature in support of the Omnibus Nonsmoking and Disease Prevention Act. These estimates were incorporated into testimony by Surgeon General C. Everett Koop; they were cited by legislators in open debate; and they were widely disseminated to the public through mass media channels.

Economic cost estimates were prominent among printed exhibits distributed to legislative committee members. Their credibility was enhanced by presenting copies of the *Minnesota Plan for Nonsmoking and Health*,[5] which also contained excise tax projections, estimates of revenues lost to bootlegging, smoking prevalence and trend data, quit statistics, behavioral intervention data, public opinion poll data, tobacco industry statistics, and recommendations for further action. A strategic imperative for successful smoking control legislation is to know more about the issue than anyone else in the State or among the tobacco interests and to present what you know creatively with heavy emphasis on economics.

The data collection and economic cost calculations were initially performed in the service of developing a unified statewide strategy for smoking control and actively promoting the nonsmoking lifestyle. In 1981, the Minnesota Department of Health (MDH) embarked on a long-term project to control risk factors for chronic diseases. Cigarette smoking was selected as the first and most important target problem. In the summer of 1983, MDH established the Center for Nonsmoking and Health to coordinate the statewide nonsmoking initiative. Researchers in the Center immediately began calculating the disease impact of cigarette smoking in Minnesota. A multidisciplinary technical advisory committee was convened in the fall of 1983, briefed on the scientific and economic findings, and charged with the task of developing a multistrategy statewide smoking control program. The full scientific report of the advisory committee, *The Minnesota Plan for Nonsmoking and Health*,[5] was released in September 1984 and contained 39 separate recommendations in five major categories: (1) school and youth education; (2) public education and communications; (3) public and private regulatory measures; (4) economic incentives and disincentives; and (5) information and evaluation needs.[5,6]



From its inception, the Minnesota Plan was intended for implementation. Among the 39 recommendations, a core subset, drawn from all five major areas, was amenable to legislative action. Drafted as the Omnibus Nonsmoking and Disease Prevention Act, the legislation was introduced in March 1985. The Act contained the following provisions:

- Specification of the duties of the Commissioner of Health to increase worksite compliance with the Minnesota Clean Air Act and to assist worksites in the development of progressive smoking control policies.
- Appropriation of money to school boards to implement targeted smoking intervention programs for adolescents, aged 12 to 14, and a continuum of smoking education from kindergarten through grade 12.

(See **The Minnesota Plan**, page 4)

FOOTNOTES

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[3]Rice DP, Hodgson TA. Economic costs of smoking: an analysis of data for the United States. Presented at: Allied Social Science Association annual meetings; San Francisco, CA; December 1983.

[4]Shultz JM. Perspective on the economic magnitude of cigarette smoking. NY State J Med 1985;85(7):302-6.

[5]Minnesota Department of Health. The Minnesota plan for nonsmoking and health: report and recommendations of the Technical Advisory Committee on Nonsmoking and Health. Minneapolis: Minnesota Department of Health; 1984.

[6]Dean AG, Shultz JM, Kottke TE, Gust SW, Harty KC. Minnesota plan for nonsmoking and health: ideas for statewide action. Minn Med 1985;68(5):371-7.

The Minnesota Plan (From page 3)

- Appropriation of money to the Commissioner of Health to conduct a coordinated, multimedia public communications campaign to promote nonsmoking.
- Appropriation of money to the Commissioner of Health to award special project grants to community health service agencies and nonprofit organizations for community-level and state-level smoking prevention programs.
- Appropriation of money for program evaluation and a biennial report to the Minnesota Legislature.
- Elevation of the state excise tax on cigarettes.
- Prohibition of free distribution of cigarettes for promotional purposes in the State of Minnesota.
- Provision of staff positions in MDH.

The nonsmoking bill was introduced in the Minnesota Legislature in March 1985; passed on June 10, 1985, as a section of a large, consolidated tax cut bill; and signed into law by Governor Rudy Perpich on June 28, 1985. The final bill raised the excise tax on cigarettes by 5 cents and retained all of the provisions listed except for the ban on the free distribution of cigarettes. Dedicated funding for nonsmoking programs from the excise tax increase exceeds $4 million for the biennium. An additional provision will increase the Minnesota state excise tax contingent upon and equal in amount to any decrease in the federal excise tax on cigarettes.

The Minnesota Coalition for a Smoke-Free Society by the Year 2000 was formed in November 1984 to unify support for statewide smoking prevention and control. Composed of the Minnesota affiliates of the American Cancer Society and the American Heart Association; the Minnesota, Hennepin County, and Ramsey County chapters of the American Lung Association; Minnesota Medical Association; Association for Nonsmokers; Minnesota Department of Health; other health professional organizations; and major health insurance carriers and HMO's, the Coalition has made implementation of the *Minnesota Plan* one of its primary objectives. During the legislative process, Coalition members provided a strong presence at the capitol by actively lobbying legislators, writing letters of support, organizing their membership, and supplying expert testimony in support of the nonsmoking bill. Additional support was generated by informal alliances with agencies selected to receive program funding from the excise tax increase.

Lessons Learned

1. Detailed health and economic impact arguments, using State-specific data, provide a clear problem statement, key points of testimony, and compelling justification for smoking-control legislation.
2. A comprehensive statewide smoking-control plan, developed by an expert committee with wide-ranging expertise, serves as an effective launch point for nonsmoking legislation.
3. Coalition building among organizations concerned with the health and economic effects of smoking aligns broad-based support for a legislative campaign. ⊕

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The Maine Coalition: Workplace Smoking Act of 1985

by Edward F. Miller, M.S.Ed.

Occasionally a bitter defeat can be the impetus for future success. This was certainly the case in Maine when a 1983 attempt to protect nonsmokers in the workplace was crushed out before it began. Now, 2 years later, the Workplace Smoking Act of 1985 has become state law.

Acting in response to the 1983 passage of a worksite smoking law in Connecticut, the Maine Lung Association initiated action to pass a similar law in Maine. Correspondence with the cancer society, heart association, and osteopathic and allopathic medical societies explained the idea and sought support. Shortly after Thanksgiving a meeting was held with the Board Presidents and Executive Directors of these organizations and a legislator interested in sponsoring such a bill. They agreed to draft a bill and submit the title to the State Legislative Council for inclusion in the Second Regular Session of the Maine Legislature. (During the even numbered years, the Maine Legislature meets for a short session devoted to "emergency" bills. A bipartisan Legislative Council determines which bills are to be included. The term "emergency" is often interpreted quite loosely.)

The effort to involve a number of organizations proactively in a smoking bill represented a first in Maine. Since the initial group was considered too small a base to support the bill effectively, the Bureau of Health and the Maine Lung Association invited a wide range of organizations to a strategic planning session. Response to the invitation was enthusiastic. A few days before the meeting, however, the Legislative Council rejected consideration of the bill in the Session. The political weakness of those supporting the concept of nonsmokers' rights could not have been more clearly indicated. (Other bills to allocate funds for a portrait of a former governor and to regulate therapeutic massage were deemed to be "emergencies" and were included in the Session.) Supporters had expected to tangle with the tobacco industry during the legislative process but had not anticipated that the proposed bill would be excluded from consideration. It was obvious that a great deal more sophistication was needed.

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The Maine Coalition (From page 4)

The planned meeting was held. After the anger subsided, the group acknowledged its weakness and decided to formally organize the Maine Coalition on Smoking or Health as a coordinated attempt to pass a worksite bill during the next Legislative Session. The Coalition's initial efforts were focused on expanding its membership, drafting a clear, concise bill for discussion, and raising funds for the political fight in the next Legislative Session.

During the early months of 1984, the original members worked to expand the Coalition membership. The attorney lobbyist for the Maine Medical Association was particularly effective in both drafting the bill and guiding the group through some of the political realities that needed to be considered in passing a law. The active participation of the Maine Labor Group on Health, Inc., a private agency with representation from the major unions in the State, was particularly critical in assuring that organized labor's views on the subject were considered.

The first full Coalition meeting was held in May 1984. The State Health Officer was elected chairperson, and the Division of Health Education in the Bureau of Health was selected to provide staff support. A smaller steering committee was elected and charged with modifying the first draft of the bill and outlining legislative strategies. When a major conflict arose over the restrictiveness of the bill, the group agreed to take a modest approach, requiring policies of all employers regardless of size, but not dictating that all workplaces must be entirely smoke free. Coalition members were asked to obtain their organizations' formal support of this concept. Even at this early stage, the representatives realized that their personal support was not enough. The boards and constituencies of all Coalition members must be firmly committed and prepared to act.

Various activities conducted during the Coalition's development had an impact on the group's later success. For example, the Maine Lung Association's entire annual meeting was devoted to smoking in the workplace. It included presentations by Marvin Kristein, Ph.D., a health economist, and Alvin Brody, a Boston law professor who also gave the Coalition valuable legal advice on its draft bill. The new Commissioner of the Department of Labor agreed to give the Bureau of Health authority to enforce the law, should it go into effect. While on the surface that may not seem particularly important, this authority was later critical in convincing legislators of the enforceability of this law. Since the State Legislature had been displeased with the Department of Labor's implementation of the recent Chemical Identification Law affecting Maine businesses, putting them in charge of the Workplace Smoking Act might have doomed the bill from the start.

The initial defeat of the worksite bill and the poor performance of other smoking bills convinced the Coalition that professional lobbying help was needed. Members of the Coalition who were registered lobbyists further reinforced this decision. The Maine Lung Association offered $1,500 support if the heart association and cancer society would match their contribution. After the Coalition intervened in some internal organizational issues, they both agreed. This was the first time these groups had financially contributed to a common effort. Dedicating the money for legislative action, an area where the heart association and cancer society had not been particularly active, was also unique. Many others provided similar contributions and services.

In early fall 1984, on the advice of the Coalition's lobbyist, an important meeting was held with outside groups considered to be critical in passing the law. These were the Maine Chapter of the National Association of Independent Businesses, the State Chamber of Commerce and Industry, and the Maine Merchants Association. One of the Capitol area's largest employers who was sympathetic to worksite smoking restrictions was invited to this special Executive Committee meeting. The business organizations, as expected, were not elated by the prospect of a new law and certainly did not volunteer to join the Coalition. They were extremely helpful, however, in giving constructive criticism of the proposal. Unintentionally, they reinforced the Coalition's decision that the law should cover all worksites regardless of size. Not to do so could be interpreted as an insinuation that some workers' health is more important than others, a point that could easily have been used against the Coalition.

After meeting with the business groups, the Coalition completed the draft bill and, working closely with the lobbyist, developed strategies for the next 5 months. A press conference was planned for early in the Legislative Session to coincide with the printing of the bill. Contacts were made to ensure that the bill would be sent to the more favorable Human Resources Committee as opposed to the Business and Commerce Committee. The sponsor and the Clerk of the House worked to schedule the most advantageous hearing date. They were aware that an early date might create an undesirably lengthy debate and that, late in the Session, the concern for appropriations might detract from the bill. Since 1984 was an election year, the Coalition was wisely advised not to seek cosponsorship until after the general election and the equally important legislative leadership assignments had occurred. The group's initial inclination might have been to act prematurely.

One of the most important actions prior to the session was the Coalition sponsorship of a Legislative Lobbying Workshop for members and the general public. Basic information on how a bill becomes law was presented, and the Workplace Smoking Bill was used as an example. Key legislative figures were invited to serve as both presenters and panelists. This workshop solidified Coalition support prior to the busy Legislative Session and provided a target date by which all Coalition members were expected to officially endorse proposed legislation.

In mid-December, cosponsors of the bill were selected to ensure representation of interest groups in the State.

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The Maine Coalition (From page 5)

The primary sponsor was a female Democrat from the urban southern region. Cosponsors consisted of a female Republican Representative and the male Democratic Senate Majority Leader, both from the rural northern part of the State, and a conservative male Republican from another rural area. All spoke at the January press conference announcing the bill's printing. The Coalition assembled press packets designed to help the media highlight the issue, the bill, and the Coalition. At the time of the press conference, the Coalition membership included over 30 organizations, many of whom had never before worked closely together on any piece of health-related legislation. After the press conference, Coalition members were asked to begin constituent calls to legislators stressing the importance of passing the Worksite Smoking Act.

The Coalition had arranged with the sponsor and the Clerk of the House for at least 3-weeks prior notice to the public hearing on the bill. At the hearing, the Coalition presented a carefully orchestrated series of speakers representing the Governor's office, the Coalition, physicians from throughout the State, and workers whose health had been affected by secondhand smoke. A large chart of the Coalition membership was displayed for the benefit of the press and the committee members. Testimony was particularly designed to focus on the issue, and the quality of the speeches was carefully monitored. Anecdotes were balanced with scientific fact. Even the room was specifically chosen so that it would accommodate the crowd without being too large and thus appearing empty.

The Coalition's most critical work took place between the February hearing date and the passage of the bill in late April. After a positive public hearing, it is easy to become overconfident. However, coalition members, their lobbyist, and the tobacco industry representative appeared at every work session of the Human Resources Committee. These meetings, which were critical in maintaining the integrity of the bill, were often scheduled on short notice. Constituents telephoned undecided committee members and legislators. Since Senate support was key, score sheets were kept on members to determine where to focus attention. Letters were sent to the editors of major daily and weekly newspapers throughout the State. One of the turning points in the legislative process occurred when the representative for the Maine Chapter of the National Association of Independent Businesses, which had opposed the bill, presented a survey indicating that a majority of their members supported worksite smoking restrictions.

After passage of the Workplace Smoking Act in April 1985, the Coalition spent little time savoring the victory. Working closely with the Bureau of Health, Coalition members began the more difficult task of helping Maine businesses put the law into effect. Organizations throughout Maine have been trained by the Bureau to provide consultation in implementing the law.

The Coalition has established new objectives for the next legislative session focusing on taxation and warning labels on smokeless tobacco, reductions in health insurance premiums for nonsmokers, and a ban on the distribution of free cigarettes within the State.

Lessons Learned

1. From a State Health Department point of view, the use of a broad-based coalition is an effective political tool in promoting public health action. The Coalition was an excellent forum for putting outside pressure on the political system. Although the State Health Officer, as chairperson of the group, was able to make direct contact with legislators, having a paid lobbyist and experienced lobbyists as part of the Coalition was a definite advantage.
2. Every coalition should have a clear objective that is understandable to its members, to the public, and especially to the media. It is much easier, for example, to focus on a specific issue such as raising the legal age for purchasing tobacco products than it is to promote a broader concept like greater coordination of services directed at children.
3. Staffing is critical. No group can function at a high level without good communication and staff support. In addition, if your coalition is political in nature and intent, seek qualified, competent lobbying assistance and share the cost. The price of not using competent assistance may well be failure. While staff support for the Maine Coalition on Smoking or Health came from the Division of Health Education, the lobbyist's office provided a very useful alternative means of reaching Coalition members when more political action was necessary.
4. Focus on your supporters and avoid overreacting to your opposition. Seek broad-based involvement in building your organization and continue to recruit new members throughout the process. Meeting with those who do not support your efforts can serve to present your group as a reasonable, concerned force; help to uncover the perspective of others; eliminate a common legislative delay tactic which asks opposing parties to resolve the issue outside the legislative arena; and force you to clarify your position and obtain consensus among your members on critical points.
5. Remember, it is easy to call yourself a coalition, but, to seasoned legislators who understand special interest groups, you are not a force to be reckoned with until the telephones start ringing, the mailbox starts filling up, and the people in their district want action.

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LLOYD KOLBE JOINS THE CDC TEAM

All of us in the Division of Health Education are delighted to announce that as of February 1, 1986, Lloyd Kolbe, Ph.D., will be joining the staff of the Office of School Health. Lloyd, who will be leaving his post as Associate Director of the Texas Center for Health Promotion, Research, and Development at the University of Texas Medical Center in Houston, brings an international reputation for excellence in health education and health promotion to CDC. His addition to our school health team is intended to add impetus to CDC's contribution to the goal of having all the youth in our Nation's schools exposed to quality comprehensive school health education. Welcome aboard, Lloyd!

Marsh Kreuter

Regulating Smokeless Tobacco: One State's Experience

by Gregory N. Connolly, D.M.D., M.P.H.

On July 15, 1985, the Massachusetts Department of Public Health acting under the authority of the state's Hazardous Substance Act promulgated a regulation declaring moist snuff, a form of smokeless tobacco, to be a toxic substance and irritant. Effective December 1, 1985, a health warning label will be required on all packages of snuff sold in the State. Currently eight other States have legislation pending that would require a similar label, and both Houses of Congress are considering legislation for health warning labels on smokeless tobacco. This report will review the events that led to this action.

In February 1984, the Massachusetts Department of Public Health received a number of inquiries from physicians and dentists in the State on the health effects of smokeless tobacco. Many of them had examined young boys who were users and reported mouth lesions at the site the tobacco was held. Use of smokeless tobacco was hitherto unheard of in the State and the reports were a surprise. A review of the scientific literature was conducted, and preliminary findings linked use with nicotine dependence and oral cancer and other periodontal diseases.

To better understand the extent of the problem, a survey of 5,000 high school students' use of drugs and alcohol was amended to include questions on smokeless tobacco. The results were reported in October 1984 and showed that 28 percent of high school boys reported trying smokeless tobacco at least once and that 12 percent reported using it several times or very often. The data indicated that a significant number of male adolescents were experimenting with smokeless tobacco and that, if they continued, they would increase their risk of developing mouth cancer and other health problems and would possibly switch to cigarette smoking when they were older.

A year earlier, the United States Tobacco Company had targeted the urban northeast as a new market for their smokeless tobacco products. Throughout the year and even during coverage of the Winter Olympics, television advertising used popular sports figures to portray going smokeless as a safe, healthy alternative to cigarette smoking. At many Massachusetts colleges, there were student representatives paid by the tobacco industry to promote use on campus, and many of the sports magazines also advertised the product. Neither the ads nor the packages informed the new users of possible health problems. In fact, in one ad, ex-football player Walt Garrison stated, "At first you could feel a slight irritation on the gum ... but things pass with practice and in two weeks you'll be a pro."

Managing health risks begins with informing the consumer of the possible health effects of using a particular substance. It was clear that Massachusetts consumers did not understand the risks of smokeless tobacco and that the industry was not adequately informing them. What occurred in Massachusetts was a classic example of an unregulated industry using Madison Avenue advertising to encourage adoption of an unhealthy product. In November 1984, the Massachusetts Department of Public Health contacted the Federal Trade Commission (FTC) and other federal agencies to determine what they were doing to address the problem.

In February 1984, Public Citizen, a Washington-based health advocacy group, had requested that the FTC require protective labeling. This action came after an 18-year-old boy from Oklahoma died from oral cancer. The boy had used snuff heavily for 6 years, and his mother claimed that its use caused the cancer. There was interest at the federal level but no indication that anything would be done in the foreseeable future. In late November 1984, the World Health Organization's International Committee on Cancer Research concluded that snuff of the type used in North America was a human carcinogen.

Congress has not preempted the regulation of smokeless tobacco products as it has cigarettes. Therefore, state health agencies have the authority to regulate smokeless tobacco just as they do any other consumer product. Therefore, to avert a growing health problem, the Massachusetts Department of Public Health announced on January 6, 1985, its intention to require warning labels on snuff. On February 6-7, 1985, the Department conducted public hearings on the proposed regulation and over 70 witnesses testified including national experts, young users, and representatives of major health organizations and agencies including the federal Centers for Disease Control, American Dental Association, American Cancer Society,

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Regulating Smokeless Tobacco (From page 7)

and the heart and lung associations. The industry presented a number of expert witnesses who challenged the proposed regulation.

Over 400 pages of testimony including 125 scientific studies were submitted during the hearings. Fourteen epidemiologic studies that controlled for exposure to other risk factors consistently showed that smokeless tobacco (in particular, snuff) increased the risk of oral cancer; that the cancer usually occurred where the tobacco was held; and that the greater the exposure, the higher the risk. Twenty animal studies were submitted that demonstrated that the nitrosamines contained in snuff produced tumors in the mouth as well as other parts of the body of animals. Histological evidence demonstrated that leukoplakia, a white patch formed in the mouth by smokeless tobacco, had a malignant transformation rate of 3 to 6 percent over time.

Snuff was also shown to produce blood nicotine levels equivalent to those found in smokers and sufficient to result in addictive use. Finally, 10 studies were presented showing that gum disease occurred where the tobacco was held. On July 15, 1985, after a thorough review of the evidence, Commissioner Bailus Walker promulgated a state regulation requiring that, effective December 1, 1985, all packages of snuff bear the following label:

> Warning: Use of Snuff can be addictive, can cause mouth cancer and other mouth disorders.

Following the February hearings, eight other States (Oregon, Utah, Illinois, Pennsylvania, Michigan, Delaware, New Jersey, and New York) filed legislation requiring a similar label, and a number of other States are expected to file legislation next year. In April 1985, at the request of the FTC, the Surgeon General announced formation of an expert panel to investigate the health effects of smokeless tobacco. The National Institutes of Health will hold a Consensus Conference in January 1986 on the same topic. The Surgeon General is expected to report back to the FTC by mid-1986. In the summer of 1985, four bills were filed in Congress that call for an excise tax on these products, a ban on television advertising, and national health warning labels. Much has happened during the past few years to address the problem, but much more has to be done if a potential national epidemic of oral cancer is to be prevented by the turn of the century.

Lessons Learned

1. All tobacco products should be subject to the same regulatory controls that exist for cigarettes. A national warning label should be required with the provision that the States could exceed it if they wish. The federal excise tax on smokeless tobacco should be reinstated, and television advertising banned. At the state level, the sales age for smokeless tobacco should be raised to 18, and smokeless tobacco products should have a state excise tax and warning label. States that do not have these laws currently should seek such legislation.
2. Health education programs aimed at smoking prevention or cessation should include information on smokeless tobacco, and health educational materials should be developed at the federal, state, and local levels. An Oklahoma survey found that adolescents began using smokeless tobacco 3 years before smoking cigarettes. There is concern that smokeless tobacco is an early introduction to tobacco and that children may switch to cigarette use when it is socially unacceptable to dip or chew. Therefore, health education efforts should be aimed at all forms of tobacco.
3. Professional athletes and teams should be requested not to appear in promotional ads or to use the product during televised sports events. ⊕

For further information, contact: Gregory N. Connolly, D.M.D., M.P.H./Massachusetts Department of Public Health/Division of Dental Health/150 Tremont Street/Boston, MA 12111.

A Michigan Initiative for Health Promotion

by Richard B. Murdock, M.H.S.A., and Sunny F. Chiu, M.P.H.

We in the public health arena often focus our attention on programmatic issues and sometimes lose sight of the importance of a clearly defined policy. Generally speaking, however, programs without a clear purpose suffer during economic downturns. Consequently, Michigan has attempted to prescribe a health promotion policy aimed at establishing a longstanding focus.

In early January 1985, legislation was introduced in the Michigan Legislature to establish a program for health promotion and risk reduction. This legislation (Senate Bill 4) has received considerable attention as a serious and comprehensive attempt to organize and provide statewide health promotion and risk reduction programs. While debate on this legislation will continue in the fall, a review of the proposed statute and related events may prove useful for other States or localities attempting similar initiatives.

Perhaps the primary reason for serious consideration of Senate Bill 4 is its relationship to health care cost containment. In Michigan, as elsewhere in the United States, per capita personal health care expenditures have grown tremendously and were estimated to be over $1,400 for 1985. This figure represents over $12 billion in Michigan.

(See **A Michigan Initiative**, page 9)

A Michigan Initiative (From page 8)

Moreover, Michigan State government health care expenditures are approaching 25 percent of the entire state budget, an estimated $2.8 billion for fiscal year 1985. The majority of state expenditures are allocated for treatment programs, with less than 6 percent for prevention programs generally and less than one-half of 1 percent for primary prevention. Finally, the cost of employee health benefit plans in Michigan exceeds the combined expenses of worker compensation, business taxes, and unemployment insurance. It is therefore not surprising that legislation and state policy have been aimed at controlling the increases in health care costs. It is within this background that the growing consensus on health promotion emerged.

Both the Michigan Legislature and Executive Office have developed proposals for addressing rising health care costs. These include such efforts as preferred provider organizations, expansion of health maintenance organizations, and prospective payment systems. These initiatives are aimed at regulating utilization of health services through controls placed upon providers. Previously, little attention was given to reducing the demand for services. However, the formally adopted reports recommending controls upon providers also emphasized the value of prevention generally and, more specifically, the role of health promotion in reducing utilization of services. What was necessary at this stage was the development of a legislatively sanctioned report exclusively highlighting health promotion.

In November 1984, a Senate Committee studying health care costs adopted the report and recommendations entitled "Health Care Cost Containment—A Preventive Approach".[1] This report capitalized on the prevention recommendations contained in previously released reports from the Michigan House of Representatives and the Governor's office.

The recommendations of the Senate Report were based on data analysis that related health risk factors to over 50 percent of deaths and productive years lost as well as to significant health care expenditures.[2] This analysis presented legislators and others with the full impact of these risk factors and with the impressive results that a modest decline in their prevalence could have on meeting the 1990 Objectives for the Nation.

Following the adoption of the Senate Report, the staff was directed to draft specific legislation to implement the report's recommendations. Thus Senate Bill 4 was developed and introduced in January 1985.[3]

Because decisions on the Senate Report and resulting legislation would be politically motivated, it was decided early in the development of the report to involve as many concerned interest groups as possible. The reasons for this approach were:

- The earlier groups and organizations become involved, the more likely their point of view can be accommodated without serious compromise of the final product.
- Because health promotion initiatives had not previously received serious consideration, success would require a major grassroots lobbying effort designed to convey the idea that the legislation would be beneficial to many.
- Research findings indicated that successful health promotion programs resulted from communitywide efforts, in multiple settings, by a variety of providers. Consequently, implementation would require that the existing public health delivery system function as a coordinator rather than as a major provider and would also require the services of other public and private providers. Therefore, their early involvement would be critical for ultimate implementation, and public health groups would have to become more comfortable within the political arena.

A variety of major interest groups worked together to draft the report and prepare the legislation. Those involved included professional associations representing physicians, hospitals, and nurses; organizations dealing with aging, substance abuse, maternal and child health, and lung disease; local public health and mental health organizations; and individual employers as well as state agencies.

In early June, the Michigan Senate passed Senate Bill 4 by a vote of 32 to 2. This followed two public hearings that were well attended by supporters and several subcommittee and full committee meetings. The major change in the legislation was the deletion of the proposed trust fund for health promotion and the provision for funding from the state cigarette excise tax. As adopted by the Senate, the legislation establishes a state center for health promotion with specific functions, establishes a state-level health promotion commission with powers to determine funding priorities and formulas for local programs and to approve local applications, and identifies local program responsibilities tied to statewide priorities and funding.

The major issues to be addressed this fall as the House of Representatives debates the legislation are:

- Whether it is a good idea to allocate funds to what is considered a "working middle-class population" at the expense of other worthwhile programs.
- Whether there is a need for a communitywide structure to implement the legislation.
- Whether risk reduction initiatives will make a difference.
- Whether there is too much emphasis on the private sector involvement and the worksite setting.
- Funding.

(See **A Michigan Initiative**, page 10)

FOOTNOTES

[1]Michigan Senate, Senate Committee to Study Health Care Cost Containment. Health care cost containment, a preventive approach. November 15, 1984.

[2]Michigan Department of Public Health. Michigan opinion behavioral risk factors, results of a 1982 statewide survey. 1982.

[3]Michigan Senate. Senate Bill 4 and substitute for Senate Bill 4. 1985.

A Michigan Initiative (From page 9)

Proponents of the legislation maintain that a minimum of $20-30 million annually will be necessary to implement the legislation.

Lessons Learned

1. A specific data base can make a difference. We are accustomed to extrapolating from national surveys and studies. Possessing statewide or local prevalence data and computing the impact of risk factors on local mortality, morbidity, and health care costs can bring the issue of health promotion/risk reduction into appropriate focus.
2. Health promotion requires the understanding and long-term support of many groups and organizations in order to secure legislation. Legislation will not be enacted unless there is a demand for action. The more active supporters there are, the better the chances for serious consideration within the legislature. This requires that public health supporters become active rather than passive participants.
3. Exemplary programs in place can eliminate many charges that health promotion is "experimental." Legislators are reluctant to support legislation and funding for programs without a clear purpose. If they can be convinced that they are responding to identified needs based upon scientific knowledge and the obligation to promote and protect the public's health, then they may be more willing to support the legislation. ⊕

For further information, contact: (1) Richard B. Murdock, M.H.S.A. Health Planning Consultant/Office of Health and Medical Affairs/Department of Management and Budget/P.O. Box 30026/Lewis Cass Building/Lansing, MI 48909; or (2) Sunny F. Chiu, M.P.H./Chief, Division of Health Education/Center for Health Promotion/Michigan Department of Public Health/P.O. Box 30035/Lansing, MI 48909.

Legislation for Drug, Alcohol, and Smoking Abuse Education in Rhode Island

by Louis A. Marciano, M.Ed.

In February 1985, a bill was introduced in the Rhode Island House of Representatives proposing the appropriation of $700,000 for drug, alcohol, and smoking abuse education. The proposal was the culmination of dual involvement by the General Assembly and the Rhode Island Department of Health and represented the efforts of many concerned individuals throughout the State. Louis Pasteur once said, "Chance favors the prepared mind." As chance would have it in this case, substantial data were being collected on teenage lifestyle during a time when Deputy House Speaker Donald Ferry was becoming very much concerned about substance abuse in his legislative district and in the State. The use of this data added considerable impetus to Mr. Ferry's campaign.

On February 15, 1984, the Rhode Island General Assembly passed Resolution 84-H-7914 establishing a special joint legislative commission to study the problem of substance abuse in Rhode Island junior and senior high schools. On the House floor Deputy Speaker Ferry declared, "The alarming stories of human tragedy among our teenagers who are abusing drugs and other substances is a disgrace and greatly disturbs me. We've got to evaluate the problem and do something about it fast."

The commission, which began work on July 1, 1984, drew 6 members from the 100-seat House and 3 members from the Senate, which is comprised of 50 seats. At least one minority member was required from each branch. Mr. Ferry served as chairperson.

About one week after the commission was established, James Carney, Legislative Liaison Officer for the Rhode Island Department of Health, arranged to meet with Lou Marciano, author of this article; John Tierney, Deputy Director of Health; and Ferry. The purpose of the meeting was to present the profile of data that would be useful to Mr. Ferry's commission. These data were gathered during the 1983-84 school year when 10,410 students responded to Wellness Check, a teenage health-risk assessment program that has since gained national prominence. Graphic presentation of pertinent risk behavior revealed that 55 percent of the teens surveyed drank alcoholic beverages, 25 percent used both alcohol and drugs, 24 percent smoked cigarettes, 19 percent either drove or rode in an automobile while under the influence, and 12 percent had seven or more alcoholic drinks per week.

Copies of the assessment data were shared with the commission and the public who were in attendance at the meeting. A separate survey that was specific to alcohol usage of 11th grade students from 11 Rhode Island communities was also displayed. Of the 2,812 students included in this survey, 51 percent were males and 49 percent were females. Fifty-eight percent of those responding said they had drunk beer by the time they were 14 years of age. The complete survey is part of the 1984 annual report of the Division of Health Promotion.

Representative Ferry and his commission held several regular and public meetings during late 1984 and early 1985. During the hearings, many school administrators, teachers, students, and police officials testified as to the seriousness of the problem. Charles Hachadorian, Chief of Drug Control for the department of health, presented data on his findings that confirmed the Wellness Check statistics concerning high levels of usage among teenagers.

(See **Legislation in Rhode Island**, page 11)

Legislation in Rhode Island (From page 10)

A major press conference was held on November 28, 1984. The purpose was to highlight the problems of substance abuse and to reveal a method for financing a school package designed by the Office of Health Promotion. The recommendation was that $700,000 be made available from a proposed 8-cent state cigarette tax. Since Congress had proposed an October 1985 reduction in the federal cigarette tax, the state tax would merely replace the federal tax and would not actually increase the cost of cigarettes in Rhode Island. Also, the additional revenue would be substantial enough to benefit several other state programs. For example, 6.3 percent of the funds would go to the drug, alcohol, and smoking abuse education program, while 81 percent of the generated funds would be used by the Governor for economic development.

On March 12, 1985, Ferry and Marciano made a special presentation to school committee officials in Ferry's representative district to point out the problems in that community. Superintendent of Schools Thomas Sweeney of West Warwick presented his data on alcohol usage at a public meeting of the school committee and became the first superintendent to reveal the confidential information provided by the health department. Other school systems came forward to confirm the seriousness of the problem in their respective schools. This ground swell of concern led to an overwhelming request for a solution to the problem through health education and health promotion.

On February 27, 1985, Representative Ferry introduced to the House, Bill number 85-H-5811, the Smoking, Alcohol Abuse and Drug Abuse Education Act. A brief description: "This act would provide for a smoking, alcohol abuse and drug abuse preventive education program with funding derived from cigarette taxes. The act would take effect on 1 October 1985 if the federal cigarette excise tax has been reduced by then."

On March 14, 1985, Representative Ferry sent a letter to President Reagan encouraging him to allow proposed legislation to pass so that the federal tax on cigarettes would be reduced by 8 cents. If this happens, there is consensus that the "Ferry Bill" will pass, and, in the process, $700,000 will be provided for health education.

The funds would be used as follows:

- To extend current model programs including Growing Healthy (School Health Curriculum Project), Providence Plan for Nutrition Education, Cross Age Smoking Project, Accident Prevention Project, Drug and Alcohol Project, and Teacher Training Project.
- For specific programs that are already under contract with the Rhode Island Department of Education but which need to be expanded to all school districts.
- For intervention programs for students already "in trouble" with school and legal officials and for school dropouts who are known substance abusers.
- For supervision, evaluation, and materials.

In conclusion, it should be noted that the federal excise tax potential will probably not develop, but that the General Assembly, when it reconvenes in January 1986, has agreed to consider a special appropriation to carry out the school health education mandate. ⊕

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Occupant Protection Legislative Activity: Current Status

Below are excerpts from a report entitled *An Annotated Guide to National Occupant Protection Activities, Materials and Programs for State and Local Agencies*. The report was prepared by Ms. Andrea Biddle, a graduate student at the School of Public Health, University of Texas, Houston, while serving an internship with the Educational Resources Branch, Office of the Director, Center for Health Promotion and Education, Centers for Disease Control, in 1985.

In 1956, safety belts were offered as optional equipment on new cars sold in the United States. A decade later, the National Traffic and Motor Vehicle Safety Acts of 1966 were promulgated. These regulations required that all passenger cars be equipped with lap and shoulder belts for front seat passengers and lap belts for rear seat passengers.[1] In 1971, these regulations were extended to include other vehicles.

In 1978, Tennessee enacted the first child restraint law. Seven years later in 1985, Wyoming became the 50th and final State to pass legislation mandating the installation and use of restraint systems to protect infants and children in motor vehicles. Child restraint devices have been shown to reduce the incidence of crash-caused morbidity by 70 to 90 percent.[2] During the 4 years after passage of the child restraint law in Tennessee, automobile-associated deaths among children under 4 years old decreased more than 50 percent.[3]

Although the mandatory use of safety belts and automatic occupant protection has been advocated for numerous years, it was not until 1984 that any legislation was enacted. In 1984, the U.S. Department of Transportation adopted Federal Motor Vehicle Safety Standard 208, Occupant Crash Protection (FMVSS 208). This standard requires "that automatic restraint systems be installed in all new cars beginning with the model year 1990 (September 1, 1989) unless, prior to that time, state mandatory

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safety belt use laws are enacted to cover at least two-thirds of the United States population." This requirement would be phased in beginning with the model year 1987 (September 1, 1986).[4]

Safety belt bills have been introduced into all but two of the States that had 1985 legislative sessions.[5] During 1984, New Jersey and New York enacted mandatory use laws for all front seat passengers. Twelve other States (Connecticut, Hawaii, Illinois, Indiana, Louisiana, Michigan, Missouri, Nebraska, New Mexico, North Carolina, Oklahoma, and Texas) enacted laws during 1985. As of September 1, 1985, laws were in effect in New Jersey, New York, Illinois, and Michigan.[6] California recently has passed a mandatory use bill.

Data on the effectiveness of mandatory use laws are available and suggest that such legislation has increased usage and reduced the incidence of motor vehicle crash-related fatalities and injuries. In New York, seatbelt use increased from 16 percent prior to the enactment of the law to 57 percent 4 months later. A 33 percent reduction in fatalities and an 11 percent reduction in injuries were observed during that period.[7]

Occupant Protection Initiatives: Two Approaches

Two approaches to national occupant protection activities have been developed. The first involves the establishment of national programs designed to reach the entire population of the United States. The second approach involves the establishment of programs at the state and local levels that can reach different segments of the population. While the concept of a national occupant protection program serving all segments of the population appears to be ideal, such a strategy is not effective. A national program must be homogeneous enough to reach the entire population. However, in designing an occupant protection program, all population characteristics (e.g., age, educational level, cultural and language differences, socioeconomic status, etc.) must be taken into account. The end result is a program that reaches only a very small segment of its intended population. To solve this dilemma, programs conducted by state, regional, and local organizations have been encouraged. Programs in these smaller organizational units may be tailored to individual needs.

The National Highway Traffic Safety Administration (NHTSA) of the U.S. Department of Transportation coordinates the occupant protection activities nationwide. NHTSA has chosen to design its occupant protection initiatives to meet local needs.

Occupant Protection Program Network

NHTSA has developed the Occupant Protection Program Network to help expose as many people as possible to occupant protection educational materials by establishing working relationships with national organizations and enlisting the aid of these organizations in promoting occupant restraint, automatic restraint, and child safety seat use among their state and local affiliates. These relationships involve a wide variety of organizations (e.g., medical, public health, educational, civic and volunteer, law enforcement, etc.). Activities within these networks include: (a) the development of coalitions supportive of occupant protection initiatives, (b) development and distribution of audiovisual resource kits, manuals, and brochures aimed at reaching specific population groups, and (c) allocation of small grants to state and local affiliates desirous of establishing programs. Some examples of the types of networks involved in the Occupant Protection Program Network are described. Current information on the status of the network components may be obtained from NHTSA's Office of Occupant Protection.

The *medical* and *public health* professions have concentrated on sensitizing health professionals to the need for occupant protection. Health care personnel have been encouraged to reinforce and promote safety belt use. To this end, audiovisual kits, handbooks, and educational materials for patient and provider education have been developed and distributed to the members of state and local affiliates of the network organizations. The Department of Health and Human Services, Office of Disease Prevention and Health Promotion, has worked to coordinate occupant protection programs with other activities in the public health area (e.g., maternal and child health, injury control, health education and promotion, etc.).

The *educational* network has provided instructors of drivers education, health education, and science with curricula, audiovisual materials, and training handbooks explaining the dynamics of motor vehicle crashes and the effectiveness of occupant restraint devices. Material outlining common myths and misconceptions about occupant restraint devices have been distributed to educators and other organizations who work with schoolchildren (e.g., Boy Scouts of America, the Girl Scouts of the U.S.A., Future Farmers of America, etc.). Educational materials also have been developed to reach the elderly population. Small grants have been awarded to local affiliates who have established or are desirous of establishing occupant protection incentive programs.

Programs and cooperative agreements with *civic* and *volunteer* organizations were the first activities undertaken by the Occupant Protection Program. These organizations have developed audiovisual and resource packages to increase safety belt use among individual members. Further, Students Against Drunk Drinking (SADD) chapters have incorporated occupant protection activities into ongoing programs. Small grants to local chapters have helped promote community passenger safety programs. The emphasis of this network recently has expanded to the building of coalitions concerned with occupant safety and the coordination of existing local programs with community-based or comprehensive programs.

(See **Occupant Protection**, page 13)

Occupant Protection (From page 12)

With the enactment of child safety legislation in all 50 States, many organizations in the network have initiated programs supporting implementation. These activities include safety seat sales and loaner programs, education and public information campaigns, in-service training programs, and technical assistance. Regional workshops also have been developed by the National Child Passenger Safety Association to increase awareness of the legislation and to encourage safety seat use.

Law enforcement groups participate in the Occupant Protection Program Network by providing safety belt community outreach programs. Further, safety belt and child safety seat training are included in all law enforcement training academies.

A Model for Occupant Protection Programs

The National Highway Traffic Safety Administration has delineated five primary methods for increasing safety belt and child safety seat use. The first consists of safety seat and safety belt use *legislation*. Twenty-eight foreign countries, 5 Canadian provinces, and 16 States have mandated safety belt use. The second method consists of *educational programs* designed to increase safety seat use. Programs currently are being conducted in schools, businesses, communities, and government agencies. The third method involves *organizational policies* that require belt use when on company business. The fourth method includes *incentive programs*. Public- and private-sector organizations are offering incentives for safety belt and safety seat use. The fifth method is *public information (mass media)*. Printed materials and radio and television public service announcements currently are being used to increase safety belt and safety seat use. Evaluations that identify effective and ineffective programs and program elements also are helpful in maximizing program impact.[8]

A comprehensive occupant protection program, whether it is community-based or statewide, will be most effective if it combines a broad spectrum of these approaches. In addition to these components, the ideal program might incorporate: (a) assessment of occupant restraint use in the target population and (b) development and dissemination of educational materials designed for specific target groups. Organizers of occupant protection programs also will find it helpful to work closely with other networks and organizations at the federal, state, and local levels. Each of the components subsequently is discussed in this section.

Legislation requiring child safety seat use has been passed in all 50 States. A comprehensive program might help provide other measures supportive of the legislation (e.g., public information, education, and incentive programs, etc.). Public information and education programs can help inform parents of the benefits of a child safety seat, develop positive attitudes toward the need for restraint use, and delineate the provisions of the legislation and methods for compliance.

At this time, 16 States also have adopted laws mandating adult safety belt use. Comprehensive occupant protection programs might support the advocacy and enactment of adult safety belt use laws where they are not present. After enactment of legislation, a comprehensive program might help inform affected individuals about the conditions of the law and methods for compliance. Law inforcement agencies also require information about legislation and informed public support for enforcing the law. Comprehensive programs might help provide this type of information.

Educational programs that target various segments of the population can be useful. These programs may be implemented in education settings, community organizations, health care settings, public- and private-sector business organizations, and through the media. Safety belt and safety seat information also may be incorporated into health promotion programs (i.e., driver's education, school health programs, child birth classes, etc.).[9]

Children under 4 years of age can be reached through day care center programs and through prenatal and perinatal education programs for parents. Safety seat loaner programs also would ensure that parents of all children covered by the law have access to safety seats without regard to financial status.

Persons in the 5- to 14-year-old group can be reached through elementary and junior high schools. High school health education and driver education classes can be used to reach the adolescent and new driver populations. Civic organizations, religious groups, and employee groups can reach adults and, to some extent, adolescents.

Community-specific information and educational programs may be developed, or national programs may be adjusted to meet the needs of distinct populations (i.e., non-English speaking groups, poor readers, isolated communities). The establishment of a clearinghouse or central distribution center for printed and audiovisual materials also may be helpful.

Organizational policies and *incentive programs* can be implemented in state and local government agencies and in the private sector. E.I. DuPont de Nemours & Co. in New Cumberland, Pennsylvania, established a safety belt education and incentive program during spring 1980. A new policy requiring safety belt use in company vehicles was implemented. An educational program informed employees of the benefits of safety belt use, of the new policy, and of the incentive program. Belt use was observed before and after the educational program. Average safety belt usage increased from approximately 44 percent in 1977 to 90 percent in 1980.[10]

Noncorporate settings also have been the site of incentive programs. The University of North Carolina at Chapel Hill, Highway Safety Research Center, has conducted a safety belt education and incentive program for the communities of Chapel Hill and Carrboro in North Carolina. From a baseline use rate of 24 percent, belt use increased steadily throughout the 6-month incentive phase and

(See Occupant Protection, page 14)

Occupant Protection (From page 13)

reached a peak of 41 percent during the last week of the campaign. Two months after the incentive phase was terminated, belt use rates declined to 36 percent.[11]

Public information programs were among the earliest attempts to increase belt use. In 1959, a 3-year program sponsored by the U.S. Public Health Service, the National Safety Council, and the American Medical Association successfully increased safety belt use in Fort Wayne, Indiana, for a short period of time; however, usage later returned to the precampaign level.[1] In 1968, a national media campaign was conducted by the National Safety Council. A postcampaign survey revealed little or no change in reported safety belt usage. In 1971, a broadcast media campaign was developed and implemented in two California communities.[12] Observation and an attitudinal survey conducted in the communities indicated that the public service announcements had little effect on safety belt use. Several other media programs have been conducted in subsequent years with similar results. Thus, public information campaigns alone may be ineffective in increasing safety belt use, but they probably are useful when combined with other methods.

A method to assess safety belt use is helpful in any program designed to increase occupant restraint use. Direct observation of belt use can help planners determine baseline usage, establish occupant protection as a priority for change, plan countermeasures, and gauge the effectiveness of educational and other efforts to increase occupant restraint use.

In summary, a comprehensive occupant protection program will be most effective in increasing occupant restraint use if it combines legislative activity, educational programs, organizational policies, incentive programs, public information (mass media) campaigns, and methods of assessing occupant restraint use. ⊕

For further information, contact: (1) Andrea Biddle/University of Texas/School of Public Health/Houston, TX 77096; or (2) Educational Resources Branch/Office of the Director/Center for Health Promotion and Education/Centers for Disease Control/1600 Clifton Road, N.E./Building 3, Room SSB-33A/Atlanta, GA 30333.

FOOTNOTES

[1]Highway Users Federation, Automotive Safety Federation. The safety belt proponent's guide. Washington, DC: Highway Users Federation, 1984.

[2]Scherz RG. Washington state seat belt study 1970-1977. Presented at the Child Passenger Safety Conference in Nashville, Tenn, May 1978.

[3]Decker MD, Dewey MJ, Hutcheson RH Jr, Schaffner W. The use and efficacy of child restraint devices: the Tennessee experience, 1982 and 1983. JAMA 1984;252:2571-5.

[4]National Highway Traffic Safety Administration. Federal motor vehicle safety standard occupant crash protection. Federal Register 1984;49:28962-29010.

[5]Centers for Disease Control. State legislative activities concerning the use of seat belts—United States, 1985. MMWR 1985;34(33):505-8,513.

[6]National Safety Council. Policy update: mandatory safety belt use laws by state in the U.S., June 21, 1985. Washington, DC: National Safety Council, 1985.

[7]New York State Department of Motor Vehicles. Personal communication with Marcus P. Salm, August 1985.

[8]Nichols JL. Effectiveness and efficiency of safety belt and child restraint usage programs. Washington, DC: US Department of Transportation, 1982.

[9]Reynolds JA, Nyberg JM. Developing motor vehicle occupant protection programs in local health departments. Health Ed Quart 1985;11:159-170.

[10]Geller ES. Motivating safety belt use with incentives: a critical review of the past and a look to the future. In: Advances in belt restraint systems: design, performance, and usage (No. 14). Society of Automotive Engineers, 1984.

[11]Campbell BJ, Hunter WW, Stutts JC. The use of economic incentives and education to modify safety belt use behavior. Health Ed 1984b;15:30-33.

[12]Fleischer GA. A study of the effectiveness of a radio-TV campaign on safety belt use. J Safety Res 1973;5:3-11.

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Two new issues in the *Healthfinder* series have been prepared and are now being distributed:

- *Financing Personal Health Care.* Everyone needs professional health care services to prevent or treat illness. As health care costs increase, many consumers often need financial assistance to help offset the burden of health care services. This resource list provides some options for financing personal health care, including information on health insurance, HMOs, community health centers, Medicare and Medicaid, the Hill-Burton Free Hospital Care Program, and assistance for specific populations. General resources are also listed.

- *Spanish Language Health Information Materials.* Spanish is the second most widely spoken language in the U.S. today. Health educators and health professionals who provide information to the Spanish-speaking segment of the population seek materials that promote good health habits, but finding materials can be difficult. While this resource list is not comprehensive, it does highlight Spanish language materials distributed by some organizations in the NHIC database and includes pamphlets, brochures, and other materials from these governmental and private organizations.

In addition to these new *Healthfinders*, three previous issues have been updated:

- *Exercise for Older Americans.* This *Healthfinder* describes some of the currently available books and pamphlets that focus exclusively on exercise for this age group. Included are materials for people who want to initiate a program as well as for instructors designing and conducting the exercise program. Exercises range from movements for the bedridden to more vigorous activities.

- *Health Risk Appraisals.* In the past decade, many health professionals have adopted the health risk appraisal (HRA) as a tool to help people recognize their risks. A typical HRA asks questions about habits such as smoking, exercise, and diet. This resource list describes HRAs that are currently available. They are divided into three categories: computer-scored HRAs; microcomputer-based HRAs; and self-scored questionnaires. HRA instruments are listed for purposes of information only. They have not been evaluated by the Department of Health and Human Services, the ODPHP, or the NHIC.

- *Toll-Free Telephone Numbers.* This resource lists and briefly describes useful toll-free telephone numbers that are available on a variety of health topics. The type of information available from these services and their hours of operation vary. Some of the numbers listed offer recorded messages; others have staff available who will give personalized counseling and respond to specific questions.

The third edition of *Health Information Resources in the Federal Government* is also now available from the NHIC. To request any of these publications, contact the NHIC at (800) 336-4797, (703) 522-2590 in Virginia. You can also write to request the publications: NHIC, PO Box 1133, Washington, DC 20013-1133.

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EDITORIAL COMMENTARY BY KENNETH E. POWELL, M.D.[1]

Difficult Issues in the Promotion of Physical Activity

The topics covered in this issue of *Focal Points* represent some of the most important and difficult areas in the promotion of physical activity; however, they are but a portion of the complete exercise promotion puzzle. The total picture, as we see it, is a community-wide endeavor against a background of support from the state and national levels—for it is at the community level that the pieces come together and create an atmosphere in which regular physical activity becomes the norm, and all citizens participate in its pleasures and its benefits.

This issue's articles were written by some of the leaders in those areas in which we are still struggling to find the best approach. The topics include programs for specific groups such as the obese, minorities, the elderly, and children; programs at schools and worksites; the common problems of adherence and medical screening; and the efforts of the President's Council on Physical Fitness and Sports.

Whether or not regular exercise is beneficial to health is no longer a question. Regular physical activity reduces the risk of coronary heart disease, helps maintain appropriate body weight, and reduces the symptoms of anxiety and mild-to-moderate depression. It has been estimated that about 30 percent of coronary heart disease is attributable to inactivity.

Less firmly established is the role that physical activity plays in the prevention or control of hypertension, osteoporosis, type II diabetes, and a variety of psychiatric and psychological conditions. On the negative side, physical activity is associated with an increased risk of musculoskeletal injuries. This is not to say that all the answers are in. Important questions remain about the specific effects of different kinds of activity on different aspects of health. For example, the type of activity that reduces the risk of osteoporosis may not reduce anxiety or the risk of coronary

FOOTNOTES

[1] Dr. Powell is Chief of the Behavioral Epidemiology and Evaluation Branch, Division of Health Education, Center for Health Promotion and Education, Centers for Disease Control, Atlanta, Georgia.

(See **Editorial Commentary**, page 2)

EXERCISE ADHERENCE AND MOTIVATION

by James F. Sallis, Ph.D.

People are exercising at parks and running down city streets and country lanes. Sweaty bodies sell every imaginable product on TV, and exercise clothes are the latest fashion. Despite these appearances, relatively few American adults and children exercise regularly. Half of those who do start an exercise program drop out within a year. Because so few people are experiencing the health benefits of exercise on a continuing basis, there is a need to understand the factors that motivate people to begin and to continue exercising.

Beginning an exercise program does not ensure that good intentions will translate into an enjoyable and beneficial lifelong habit. Every exerciser frequently faces both external and internal obstacles. Examining these obstacles along with the factors that make exercising easier can give program developers and educators insight that may improve overall participation and success.

Personal Factors

Certain personal characteristics seem to reliably predict a person's chances of adopting and maintaining an exercise program (see the table on page 3). Some of them, such as age, sex, and occupation are, for all practical purposes, unchangeable. They are worth noting so that poor enrollment or adherence rates in those groups are understood, if not accepted. Other factors, however, can be

(See **Exercise Adherence**, page 2)

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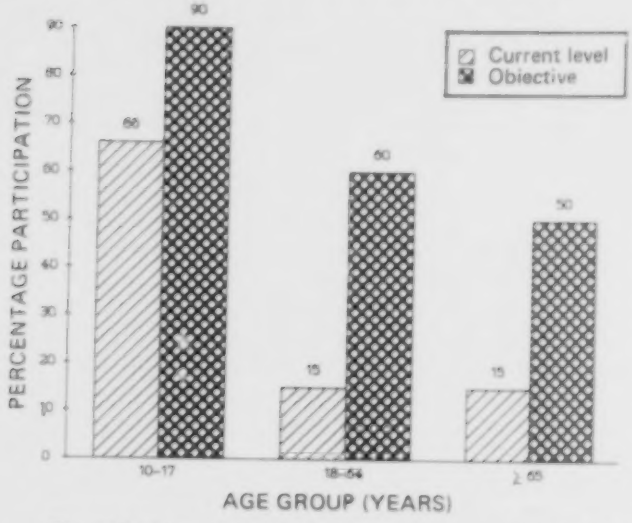
heart disease. Questions also remain about the mechanical, metabolic, and psychological effects of physical activity and the dose-response effects of activity on health. Even with these important questions remaining, current evidence strongly supports an overall beneficial effect from low-to-moderate levels of regular physical activity.

CURRENT PREVALENCE AND 1990 OBJECTIVE OF APPROPRIATE ACTIVITY, BY AGE GROUP



AGE GROUP (YEARS)

The U.S. Public Health Service recognizes the value of regular physical activity and has named physical fitness and exercise as one of the 15 most important areas for promoting improved health in the U.S. population. As the figure above indicates, however, only a small proportion of the population participates in appropriate physical activity, as defined by the 1990 Objectives. Efforts to promote regular physical activity have often produced discouraging results. In part, this is because we do not understand what makes some people active and others inactive. Therefore, we begin this issue of *Focal Points* with a discussion of motivation and adherence, and each author in turn touches upon that area.

In an area as complex as the promotion of physical activity, none of the authors presumes to present the final solution to the problem. Several of the articles make it clear that many difficulties remain. Even though no easy answers are available, many helpful suggestions are given.

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Note, in particular, the recurrent emphasis on the importance of beginning and progressing slowly and on the value of low-intensity activities. This latter concept is somewhat at variance with the 1990 Objectives but has growing support in the literature. ⊕

SUGGESTED READING

U.S. Public Health Service. Special section—public health aspects of physical activity and exercise (10 papers). Public Health Rep 1985;100 (March-April):118-224.

Paffenbarger RS Jr, Hyde RT, Wing AL, Steinmetz CH. A natural history of athleticism and cardiovascular health. JAMA 1984; 252 (July 27):491-5.

Exercise Adherence From page 1

modified. Lack of time due to work, family, or social pressures is one of the most frequent reasons for dropping out of a program; therefore, time management may be more important to some programs than the actual exercise instruction. Contrary to popular conceptions, knowledge about health and exercise and favorable attitudes toward exercise are related to beginning an exercise program but not to continuing with one. Consequently, imparting knowledge may increase enrollment, but it will not keep people coming. Since people often give medical reasons for not continuing an exercise program, instruction in injury prevention may be useful.

Moral support is a major positive influence. Exercisers can improve their chances of persevering by seeking out supportive people or by asking for support from family and friends.

Convenience does not guarantee success, but participants are more likely to continue with a program if they live relatively close to the facility. People who do not need the support of an exercise leader are not hindered by geographical barriers and can exercise in their neighborhoods or even in their own homes with a stationary bicycle, TV exercise program, or some other home exercise tool.

Exercise intensity is another important factor. In one study, maintenance of regular walking was much better than adherence to more vigorous types of exercise. At the very least, a gradual increase in exercise intensity is vital.

Many factors influence adoption and maintenance of an activity program and only a few of the more important ones have been mentioned. Since there is no one reason why people start exercising, community-wide programs should appeal to a variety of motivations. Small-group programs have the option of focusing on people with similar reasons for joining (e.g., weight loss, socializing).

Motivating Exercise Behavior

There are effective, scientifically developed methods of changing behaviors, and they can be applied to exercise behavior. Specific techniques can be used in group programs or in an individual self-help format. A few concepts

(See **Exercise Adherence**, page 3).

Exercise Adherence From page 2

will be discussed here, but more detailed guidelines are presented by Martin and Dubbert (see Suggested Reading).

For the beginner, gradually increasing time and intensity, or "shaping," is helpful both in avoiding injury and in fitting exercise into one's schedule and lifestyle. Goal setting ensures a gradual increase in time commitment, and achievement of daily or weekly goals provides the encouragement of frequent success.

Reinforcement from others in the form of encouragement or from oneself (e.g., small amounts of money for a special purpose) can give the extra motivation needed to overcome the initial barriers. Remember that reinforcement must be contingent upon accomplishing a goal. By using self-rewards, the exerciser can create motivation instead of passively waiting for it.

In group settings, leaders should provide feedback on accomplishments (e.g., distance covered, attendance, fitness gains) and should also be generous with praise. Creative use of lotteries and certificates can also increase motivation.

Exercisers can increase their chances for success by creating an environment that supports exercise. Spending time with other exercisers or driving to the exercise facility even if one is not "in the mood" to work out that day can be helpful. Laying out exercise clothes the night before or carrying a workout bag in the car may encourage people not to miss a class. Writing in "exercise" on the daily calendar is a scheduling aid as well as a remedy for forgetfulness. Beginning exercisers (or those starting over) will benefit from choosing enjoyable activities, planning convenient times and places for exercise, and signing a written exercise "contract" and having it witnessed by a supportive person.

In the maintenance phase, reinforcement from other people should be replaced by "self-rewards" such as simple praise or periodic material rewards or treats. (Exercise clothes may be a safer self-reward than a hot fudge sundae!) Continuing to set goals and sign contracts may be helpful. Some people find that keeping graphs of minutes exercised or miles run per week keeps their motivation level high. Such graphs are often used to keep track of personal goals and to stimulate self-reward.

Exercisers should be on the alert for self-defeating thoughts that may cause them to stop exercising (e.g., "I'm not making progress. . .I'm bored with this. . ."). It is important to recognize these thoughts and to realize that positive self-statements will overcome them. Focusing on helpful thoughts (e.g., "I almost always enjoy my exercise. . . I've been doing a good job of meeting my exercise goals. . .") drives out negative attitudes.

Most exercisers have their routines interrupted from time to time because of illness, travel, or other constraints. While it is inevitable that setbacks and interruptions will occur, they do not need to cause a person to relapse into inactivity. Exercisers can plan ahead to avoid discouragement and self-deprecation. It helps to realize that setbacks do not imply failure, and exercisers should focus on past success instead of becoming demoralized. Handled constructively, each relapse can serve to identify a new barrier and provide an opportunity to successfully overcome it.

Conclusion

Exercise is a difficult habit to take up, and an easy one to break. Consequently, many people experience failure, and many good programs produce disappointing results in terms of continued regular exercise. Understanding both the positive and negative influences on exercise will better equip exercisers, health educators, and public health officials alike to meet the challenge of sustaining motivation and improving success rates. ⊕

For further information, contact: James F. Sallis, Ph.D./Assistant Adjunct Professor, Family Health Project M031F/University of California, San Diego/LaJolla, California 92093.

SUGGESTED READING

Dishman RK. Compliance/adherence in health-related exercise. Health Psychol 1982;1:237-67.

Dishman RK, Sallis JF, Orenstein DR. The determinants of physical activity and exercise. Public Health Rep 1985;100:158-71.

Martin JE, Dubbert PM. Behavioral management strategies for improving health and fitness. J Cardiac Rehab 1984;4:200-8.

Oldridge NB. Compliance and exercise in primary and secondary prevention of coronary heart disease: a review. Prev Med 1982;11:56-70.

Factors That Improve Adoption and Maintenance of Exercise

Adoption

Personal Factors	Situational Factors
High income and educational levels	Convenience of facility
Young age	
Male gender	
Childhood sports participation	
Expectation of health and other benefits	

Maintenance

Personal Factors	Situational Factors
Nonsmoking	Social support
Normal weight	Convenience of facility
White collar occupation	Low-intensity or moderately vigorous exercise
Self-motivation	
Perceived ability to find time	
No medical contraindications	

MEDICAL CLEARANCE FOR EXERCISE

by Roy J. Shephard, M.D., Ph.D.

Ever increasing public interest in physical activity has encouraged critical review of currently accepted procedures of medical clearance for exercise programmes.[1,2,3] Whether the cost of the medical examination is likely to be charged against a private insurance plan such as Blue Cross or (as in Canada) against a government insurance plan, a thorough clinical and laboratory examination of every adult interested in starting an exercise programme could generate a major financial burden for the agency concerned. Moreover, recent analyses[4,5] have suggested that such physician clearance would contribute remarkably little to the safety of an exercise programme. Indeed, by producing a heavy toll of "false-positive" responses, such examinations could cause unnecessary anxiety and invalidism, and the resultant follow-up investigations might actually increase the risk to the patient.

Obviously, the physician must carefully evaluate the condition of a patient with existing symptoms. However, reasons for medical evaluation of the symptom-free and ostensibly healthy adult are much less apparent. Presumably, the main objectives are to detect (1) any cardiovascular condition that could lead to a cardiovascular catastrophe during exercise, (2) any musculoskeletal or articular problem that might be exacerbated by exercise, and (3) any other disease process where particular caution is needed in prescribing exercise. The occasional more physiologically minded doctor might also think in terms of accurately prescribing the amount of exercise.

Until quite recently, cardiologists have naively believed that a combination of resting and exercise electrocardiography would satisfy the first objective. Those patients who showed a deep horizontal or downward sloping depression of the ST segment during exercise at 85 percent or more of their maximum oxygen intake were thought to have a level of myocardial ischemia that made vigorous and unsupervised physical activity unwise. Application of modern statistical principles has now demonstrated that, if such evaluations are made on the symptom-free and relatively health-conscious adult who is likely to volunteer for an exercise programme, at least two of every three supposedly abnormal electrocardiograms will produce a false-positive result![4,5]

Uncritical interpretation of the exercise electrocardiogram in the healthy individual thus leads to an unacceptably high proportion of erroneous warnings concerning the dangers of exercise. The proportion of false-positive results can of course be reduced by adopting more restrictive indications for exercise testing. For example, the examinations might be restricted to a much smaller group of exercise volunteers who are obese, heavy smokers, hypertensive, *and* over the age of 40. In such a population, the prevalence of myocardial ischemia may be as high as 50 percent and a false-positive electrocardiogram will then occur in only about 11 percent of those tested.

However, the primary object of the evaluation is not to detect ischemia, but rather to sort out those patients who will develop a cardiac catastrophe (whether ischemic or not). It is thus disappointing to find that, even when exercise electrocardiography is restricted to such an extremely vulnerable population, predictions of an exercise-induced cardiac incident are wrong two times out of three.[4,5] A cynic might suggest that it would be advantageous to replace the stress electrocardiogram by the simple toss of a coin; the expense would be much less, and one would avoid the morbidity associated with exercise testing.

Accuracy in the interpretation of the electrocardiogram could plainly be improved (although at considerable cost) by adding other laboratory procedures such as echocardiography, nuclear cardiology, and angiography. However, it is still uncertain that the accurate assessment of myocardial ischemia would detect those few individuals who are at risk of developing a fatal episode while exercising. Moreover, whether ischemia is demonstrated or not, the advice that the physician will give to the patient is essentially the same—stop smoking; reduce body fat; take life a little less seriously; and exercise on a regular basis, beginning at a low intensity and progressing slowly to a moderate level. The fallibility of our current process is indicated by medical rejection rates that have varied between 0.7 percent and 15.8 percent when similar large samples of the Canadian public have sought clearance for a simple step test.[5] Moreover, the likelihood of developing significant myocardial ischemia during the exercise period was totally uninfluenced by the medical rejection rate!

The likelihood of detecting future musculoskeletal problems in a symptom-free patient seems equally remote, and, even if the physician has the skills to engage in exercise prescription, the average figure for working capacity can give only a very crude guide to the individual patient.[5]

Given this pessimistic assessment of current practice, what are the alternatives? There are three possibilities: (1) make more objective use of a simple, clinical examination, using a standard format such as that suggested by Chisholm and associates;[6] (2) have the patient complete a simple checklist; or (3) structure the exercise regimen so that preliminary clearance becomes unnecessary.

There have been no formal analyses of the sensitivity and specificity of structured clinical examinations although, in terms of detecting myocardial ischemia, an unstructured clinical examination is about as effective as an exercise stress test.[4,5]

Self-administered checklists have used from 6 to about 20 questions. One such instrument, the Physical Activity Readiness Questionnaire (PAR-Q), has now been evaluated fairly extensively in Canada. Although it contains only seven items, it apparently has a very adequate level of sensitivity. In our experience, it detected *all* of those who were subsequently screened out by the examining physician. On a larger scale, it has probably contributed to the absence

(See **Medical Clearance**, page 5)

Medical Clearance From page 4

of serious complications when the Canada Home Fitness Test was performed by over 500,000 Canadians in their own homes.

However, the PAR-Q instrument lacks specificity—as many as 20 percent of the general adult population respond positively to one or more questions.[5] The main source of the excessive number of positive responses is the question, "Has your doctor ever told you that your blood pressure is too high?" Many people with currently normal blood pressure unfortunately have received such advice in the anxiety-creating environment of a doctor's office. Changing the format of the questions might create a better balance between sensitivity and specificity, but it is improbable that any simple questionnaire, comprehensible to people of varying levels of intelligence, will achieve a much better success rate. It is of course arguable that a 20 percent false-positive rate is acceptable with such a simple test, since this has immediately reduced the number of patients requiring further examination by a factor of five. Costs could be further reduced if the next stage in the process were a discussion with a paramedical health professional and if only those cases failing this level of screening were referred to a physician.

Perhaps the simplest and most effective recommendation of all is to design the exercise recommendation so that clearance is unnecessary. It is generally recognized that any adverse effect of exercise on either the heart or the joints is caused by a sudden burst of physical activity at an intensity or of a duration that is outside the recent experience of the patient. There is little danger in advising a healthy adult to increase the current level of activity slightly and to develop such activity progressively, provided that it (1) is not provoking symptoms and (2) is leaving the individual no more than pleasantly tired the next day. From a fitness perspective, small, gradual increases in walking, built into a normal working day, will probably be more beneficial than a sudden, renewed interest in sports, which may be equally quickly forgotten. Undoubtedly, a few patients will feel a sudden urge to climb Mount Everest or to run a marathon, but, if a detailed medical examination is reserved for these exceptional cases, expense will be kept within reasonable bounds, and the examinations can be rigourous enough to ensure effectiveness.

It has been suggested that a medical examination is more appropriate for the person who does not exercise than for the one who exercises sensibly. However, we do offer some specific advice to those considering starting an exercise programme:

1. Always progress gradually—do not attempt something you could do 20 years ago without adequate preparation.
2. Always reduce the level of activity temporarily if the weather turns very hot or very cold.
3. Always warm up and cool down thoroughly.
4. Always check with your physician if you notice any unusual symptoms, particularly pains or thumps in the chest.
5. Exercise in pairs. ⊕

For further information, contact: Roy J. Shephard, M.D., Ph.D./Director, School of Physical and Health Education and Department of Physical Medicine and Biostatistics/ Faculty of Medicine/University of Toronto/320 Huron Street/Toronto, Canada M5S 1A1.

FOOTNOTES

[1] American College of Sports Medicine. Guidelines for graded exercise testing and prescription. Philadelphia: Lea and Febiger, 1975.
[2] Cooper KH. Guidelines in the management of the exercising patient. JAMA 1970;211:1663-7.
[3] Ontario Medical Association. Exercise prescription—a physician's guide to assessment of patients who plan to exercise. Toronto: Ontario Medical Association, 1976.
[4] Shephard RJ. Ischemic heart disease and physical activity. London: Croom Helm Publishing, 1982.
[5] Shephard RJ. Can we identify those for whom exercise is hazardous? Sports Med 1984;1:75-88.
[6] Chisholm DM, Collis ML, Kulak LL, Davenport W, Gruber N. Physical activity readiness. Br Colum Med J 1975;17:375-8.

INITIATING AND MAINTAINING REGULAR EXERCISE IN OVERWEIGHT PERSONS

by Kelly D. Brownell, Ph.D.

Most overweight people feel they should exercise more. There are few dissenters among health professionals or the general public to the notion that exercise is beneficial for overweight people. Yet, long-term adherence to exercise programs is poor even among normal-weight people. It is worse among the obese.

Research on the motivational aspects of exercise is changing this gloomy picture. Work from physiology laboratories provides a clearer picture of the role of activity in regulating body weight. Also, treatment centers have begun to tailor exercise programs to the needs of the overweight person. Combining these factors, we can now describe an approach to exercise for overweight people that differs from the standard exercise prescriptions.

Obesity and Inactivity: Cause or Consequence?

Many studies have shown that obese people are less physically active than their normal-weight peers. Inactivity could be an etiological factor in the development of obesity, or it could be simply the result of obesity. Both conclusions are plausible. Longitudinal studies have not addressed this issue, so we must consider other data.

The difference in activity between obese and normal-weight adults is clear. It is less clear in children. One might conclude, therefore, that obesity causes inactivity. It is also

(See **Initiating and Maintaining**, page 6)

Initiating and Maintaining From page 5

possible that inactivity has etiological significance but that many years are required for the effect to be manifested. This issue is important to resolve as it may stimulate ideas about the prevention of obesity in children and may determine whether adult exercise programs will be more valuable for weight loss or for the maintenance of weight loss.

Adherence Problems

Adherence rates in exercise programs are surprisingly low. Only a fraction of the U.S. population exercises vigorously and regularly. The rates are also low in groups with special needs. More than 50 percent of men prescribed an exercise program after recovery from myocardial infarction drop out within the first year, and only 20 percent or so remain after 4 years. This group should be highly motivated to exercise, so these numbers speak to the serious nature of the adherence problem.

Adherence to exercise programs is also poor among the obese, although the issue has not been studied in detail. There are several reasons why regular exercise is not easy for an overweight person. First, excess weight creates a physical burden that makes exercise more difficult. Thin professionals who prescribe exercise to a person with 50 pounds to lose can appreciate this difficulty by imagining exercising with that much extra weight strapped to their own bodies. Second, exercise is not enjoyable when even low levels create pain and fatigue. Third, and perhaps most important, many overweight people have very negative feelings about exercise. If they were overweight as children, they may have been teased or picked last for teams and, as a result, may have become self-conscious about their bodies. These feelings can endure to adulthood, so that many overweight people do not want to be seen jogging in their neighborhoods and would feel intensely embarrassed in an exercise class where their condition is so obvious. For these reasons, it is not surprising that exercise is difficult physically and emotionally for overweight people.

Motivating Exercise

There are three basic issues to consider in establishing an exercise program for overweight people. These pertain to education, attitudes, and the exercise itself. Each is important and will be discussed further.

I would like to note here that a comprehensive approach to weight loss includes more than exercise. Exercise is important, but used alone it is effective for only a small portion of overweight people. It must be woven into a sensible program of lifestyle change. Our program at the University of Pennsylvania goes by the acronym LEARN, which represents the five components of our approach: Lifestyle, Exercise, Attitudes, Relationships, and Nutrition. I will focus on exercise here, but information about the complete program is contained in *The LEARN Manual* (instructions for obtaining a copy are at the end of this article).

Exercise Benefits

When asked why they should exercise, most dieters say, "Because it burns calories." Then they are discouraged when they learn how much exercise is required to expend the calories consumed in a single eating spree. There are, however, other benefits to consider. These can be motivating factors for some people.

Exercise expends energy. Exercise does burn calories, but this is more important over weeks and months than over the short-term. For example, 12 miles of jogging are required to burn the calories in a jumbo fast-food hamburger, small order of french fries, and a medium-sized soda (approximately 1,200 calories). On the other hand, burning an extra 100 calories per day in exercise, which is possible with 1 mile of walking or jogging, should lead to a loss of 10-12 pounds per year. The danger occurs when a person exercises and then consumes more than the expended calories because he or she "deserves it."

Exercise can help remedy the consequence of obesity. Exercise can have positive effects on several of the coronary risk factors that tend to be associated with obesity. There can be reduced serum cholesterol, increased HDL-cholesterol, reduced blood pressure, and improvements in blood sugar control.

Exercise may improve well-being. This is a nebulous area that has not received sufficient study, but the available evidence suggests that regular exercise can influence mood, self-confidence, and other psychological factors. This is important for dieters since exercise may have positive effects that generalize to dietary adherence and general attitudes.

Exercise may suppress appetite. Much of what is known in this area comes from research with animals, but exercise may help suppress appetite. Exercise will probably not increase physical hunger beyond the point of replacing the expended calories, so it would seem to have a neutral or

(See **Initiating and Maintaining**, page 7)

Senior School Health Specialist Sought By CDC

The Center for Health Promotion and Education (CHPE), Centers for Disease Control (CDC), is seeking to fill the position of Senior School Health Specialist, Office of School Health and Special Projects (OSHSP), Division of Health Education (DHE), at CDC Headquarters in Atlanta, Georgia. The incumbent will work closely with the Chief, OSHSP, and with national, state, and local organizations to analyze and improve school health programs in the U.S. Applicants should have a doctoral degree in a relevant field, advanced training and experience in school health education and in evaluation and survey research, and proven writing and public speaking abilities. For details, contact Ms. Beth Layson, OSHSP, CHPE, CDC, Atlanta, GA 30333, (404) 329-3136.

Initiating and Maintaining From page 6

beneficial effect for the dieter. However, "psychological hunger" is still a factor, so the dieter must learn the difference between actual hunger and cravings for food.

Exercise may spare lean body mass. Weight reduction is produced by loss of fat and lean tissue. The amount of lean-tissue loss depends on the nature of the diet, the rate of weight loss, pre-diet weight, and other factors, but any amount of lean-tissue loss may be undesirable. There is evidence, particularly from animal studies, that this loss is less when diet and exercise are combined than when diet alone is used.

Exercise may increase metabolic rate. Weight loss is accompanied by a decline in metabolic rate that can reach 20 percent in 14 days. Since basal metabolism accounts for the majority of expended energy, such decline can make weight loss increasingly difficult. Exercise increases metabolic rate and may help offset this decline, although this has not yet been proven.

Developing Positive Attitudes

Attitudes common to dieters present a major barrier to exercise. Some reflect the negative feelings mentioned above. These can be remedied by encouraging the person to examine the attitudes rationally and to put aside self-consciousness for the sake of weight loss.

Another major barrier is the concept of an "exercise threshold." This is the notion that, for exercise to have any value, a certain amount must be done. The more well-read patients will use the famous prescription from exercise physiology that includes specific figures for frequency, intensity, and duration. Others feel they must sweat, breathe hard, or hurt for exercise to be beneficial.

Inherent in this concept is the notion that exercise must be vigorous to be beneficial. This is counterproductive for most dieters and, for that matter, for most beginning exercisers. The frequency, intensity, and duration figures are for improving cardiovascular fitness, which is not the aim of most people who exercise to keep trim, lose weight, have a better figure, or feel better. For them, exercise in any amount is better than no exercise, and they should start with low levels of activity and progress to more vigorous exercise.

Choosing Appropriate Exercise

We begin our exercise program by noting the distinction between "solo" and "social" exercisers. Some people like to exercise alone while others like company. Forcing a solo exerciser to join an aerobics class or asking a social exercisor to ride a stationary bicycle runs counter to their individual needs. This distinction allows individuals to select from a menu of activities according to their personality type.

The behavioral principle of shaping is the next key concept in establishing an exercise routine. Shaping refers to taking gradual and attainable steps toward a final goal, beginning with a person's given level of fitness. If a dieter cannot walk one block without the experience being unpleasant, the first step will be to walk half a block. The level can be increased gradually to match increased endurance.

We also reinforce the concept that any movement constitutes "exercise." Using the stairs at work rather than an elevator, walking the dog in the morning, and playing outside with the children are all part of the picture. Walking is the most preferred activity among our patients. These will all help in the shaping process, the ultimate aim of which is exercise rigorous enough to promote cardiovascular conditioning and to maintain weight loss. ⊕

For further information on obtaining The LEARN Manual, contact: Kelly Brownell, Ph.D./Associate Professor, Department of Psychiatry/133 South 36th Street, Suite 507/University of Pennsylvania/Philadelphia, Pennsylvania 19104.

SUGGESTED READING

Brownell KD, Stunkard AJ. Physical activity in the development and treatment of obesity. In: Stunkard AJ, ed. Obesity. Philadelphia: WB Saunders, 1980:300-24.

Garrow JS. Treat obesity seriously. London: Churchill Livingstone, 1981.

Martin JE, Dubbert PM. Exercise applications and promotion in behavioral medicine. J Consult Clin Psychol 1982;50:1004-17.

Stern JS, Lowney P. Obesity: the role of physical activity. In: Brownell KD, Foreyt JP, eds. Handbook of eating disorders: physiology, psychology, and treatment. New York: Basic Books, 1986:145-58.

PROMOTING EXERCISE AMONG MINORITY-GROUP FAMILIES

by Tom Baranowski, Ph.D., Janice Henske, M.P.H., Paul Hooks, Ph.D., Bruce Simons-Morton, Ed.D., M.P.H., and J. Kay Dunn, Ph.D.

There are little data on the exercise habits of minority groups or on exercise programs designed for them. However, existing data suggest that people of low socioeconomic status, a disproportionate number of whom are members of minority groups, are less physically active than others in our society. In the hope of filling this information gap, we have been studying the promotion of diet and exercise changes in three ethnic groups. The particular study discussed in this article involved black Americans.

Primarily blue collar and other working class families participated in the 14-week program. An old high school was rented, and the gymnasium was refurbished and outfitted with contemporary equipment. The facility was open weekday evenings from 6-9 p.m. and Saturdays from 10-12 a.m. Our major problem was participation, which is the main obstacle in running any health promotion program. With low-income families, however, the problem is particularly complex.

Families were encouraged to attend educational sessions once a week and exercise sessions twice a week. Attendance was good (about 80 percent) for the first few

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weeks, declined gradually, and then stabilized at around 20 percent for the last 6 weeks of the program. Our best participation rates came from a combination of providing incentives for attendance and having well-known and trusted professional staff members call and visit participants. Some incentives were mundane, such as T-shirts or gym shorts for attending a certain number of sessions. Unusual incentives, such as periodic newspaper articles with class pictures, were also popular.

Money, even in small amounts, appeared to be a critical motivator for some participants, especially those with very low incomes. Providing money or other tangible rewards for attendance may be effective in getting people to enroll and attend long enough to begin to find internal rewards (e.g., looking good and feeling good) for continuing with the program.

Having a convenient and culturally acceptable location is also important in getting and maintaining participation. The incidence of coronary heart disease (CHD) in the nation and particularly in the black community should be emphasized. Appealing to the parental desire to protect children from known risks can increase enrollment and participation of both parents and children. Children need to be involved in the program both because they can influence their parents to attend and because they can benefit from changing their diet and exercise habits before entering adulthood.

Ministers, teachers, politicians, and other leaders in the black community report similar participation problems for their projects. Many of them have resorted to organizing their constituents' lives, including providing full transportation to and from events. Since this precedent has been set, exercise programs will probably also need to provide full transportation to have any hope of success.

Free babysitting at the program site is a particularly useful incentive. In most of these families, the mother is the head of the household, and one or more children living at home are too young to participate in our program. If the entire household cannot participate in the fitness program, the care of younger children becomes a major issue. Many mothers expressed concern about leaving their children at home alone, or the younger children themselves expressed disappointment at not being included. However, if very young children are to attend exercise sessions, they must be properly supervised. Otherwise, they will impede the efficiency of the workout and may cause safety problems. If it is not possible to include the younger children in the fitness program, free babysitting services should be offered at the fitness site. This will permit the other family members to engage more thoroughly in the program without worrying about children or being distracted by them.

Most households among the participants in this project included an adult male, but his residence is often short-lived. Attempts to involve these men in our program were rarely successful. Still we feel that every effort should be made to motivate them, even though we can provide little guidance on how to do so.

Mutual support and encouragement among family members can significantly improve participation. Among those families who did come regularly, the children appeared to have been a powerful influence upon parental attendance. In order to capitalize on this anticipated effect, we did not allow children to attend the fitness center by themselves. However, some of the mothers in our program found it difficult to accept help and advice from their children. Families should be encouraged to participate together as a unit, and they should be trained in socially supportive behaviors that will inspire continued participation in the fitness program.

Support and encouragement from fellow class members can also increase participation. Our group seemed to be very individualistic. For example, after 14 weeks of participation, many adults did not know the names of their classmates; therefore, they provided each other very little support. Including more opportunities for intimate social contact in the program would help set the stage for mutual encouragement.

The lives of many of our participants seemed to be crisis oriented. Low income and other aspects of poverty existence seemed to deny them the flexibility and capacity to anticipate and plan for problems. A seemingly endless series of deaths, illnesses, injuries, family conflicts, lost jobs, new jobs, and unusual working hours dominated their lives. It is hard to expect people experiencing such difficulties to attend prescheduled education or fitness sessions.

Helping low-income families deal with some of these crises may improve their attendance and participation in an exercise program. Then, too, it may be that people whose lives are dominated by the struggle to survive simply are not able to make health promotion, particularly exercise, a priority. If this is the case, then voluntary programs such as ours are doomed to failure. The only feasible alternative would be to integrate fitness programs into other ongoing activities. For adults this may mean occupationally based fitness programs (although there is an enormous unemployment rate among black males) or programs in churches and social clubs. For children an organizational approach may mean overhauling the school physical education program to incorporate daily aerobic activity.

If an evening program is the only available option, a variety of other prescriptions are in order. We recommend sessions no longer than 30-40 minutes in duration. Activities must be enjoyable and participative rather than inactive and didactic. There should be a variety of educational activities that incorporate the basic principles into fun games that parents and children can play together during free times at the exercise center.[1]

There is a very real need for fitness programs designed particularly for low-income families. We do feel, however, that to be successful these programs must take into account the unique circumstances and needs of these families. We offer our comments and suggestions in hopes that

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they will help others in developing future exercise programs for this group.

For further information, contact: Tom Baranowski, Ph.D./Associate Professor, Preventive Medicine and Community Health/The University of Texas Medical Branch/ Shearn Moody Plaza, Suite 7020/Galveston, Texas 77550.

FOOTNOTES

[1] Jaycox S, Baranowski T, Nader PR, Dunn JK, Dworkin R. Theory-based health education activities for 3rd to 6th grade children. J Sch Health 1983;53(10):584-8.

SUGGESTED READING

Baranowski T, Nader P, Dunn JK, Vanderpool N. Family self help: promoting changes in health behavior. J Communication 1982;32(3): 161-72.

Nader PR, Baranowski T, Vanderpool NA, Dunn JK, Dworkin R, Ray L. The family health project: cardiovascular risk reduction education for children and parents. JDBP 1983;4(1):3-10.

EXERCISE FOR THE ELDERLY

by Marianne M. Shea, M.S., and Everett L. Smith, Ph.D.

There is no specific age at which one becomes elderly—it is a very relative thing. However, for this discussion, we consider the elderly to be those who have reached the standard retirement age of 65. In no other age group will you find more disparity of interests, ability, motivation, and physical condition. These disparities make it a particularly challenging and rewarding group with which to work.

Exercise Benefits for the Elderly

Exercise appears to be important in maintaining independence, reducing disability, preventing chronic disease, and, thereby, lowering overall health care costs. Shephard states that, although exercise cannot prevent the aging process, a well-conditioned older person has the functional age of a much younger person. He hypothesizes that, barring other complications, an increase of 20 percent in a person's aerobic capacity increases the time he/she will be independent by 8 to 10 years.[1] In addition to increasing aerobic capacity, exercise improves strength, range of motion, and neuromuscular coordination.

Exercise also may prevent or retard bone loss. Osteoporosis, a reduction in bone mass that increases the risk of fractures, is common in the elderly, and especially in women. It causes about 1.3 million fractures a year at the cost of $3 to $6 million. Several studies, including our own, have shown that active people have greater bone density, particularly in the skeletal areas they stress most. In fact, in the absence of metabolic disorders and with adequate dietary calcium, exercise may actually increase bone mineral content in both young and old people.[2]

Although more research is necessary to define the intensity, duration, and frequency of exercise required to minimize the rate of bone loss and the risk of fracture, it appears that each area of the skeleton must be mechanically stressed. Weight bearing activities such as walking, jogging, or dancing are necessary to maintain the integrity of the femur, hip, and spine, while some type of mechanical stress or resistance training such as modified push ups or weight lifting is necessary to maintain the arms and upper body.

Beginning an Exercise Program

The high probability of disease and disability among this age group necessitates a more careful health assessment than might be required at other ages. This is especially true for classes where group dynamics may draw an individual into activities he or she is not ready to attempt. Therefore, we recommend that program organizers obtain a medical history from each participant and, when indicated, a doctor's approval. Tests of cardiovascular fitness, flexibility, and strength can be used to ensure relatively uniform capacity among class members.

One serious and frequent mistake is to run exercise programs according to chronological age instead of functional age. For example, a 70-year-old who walks several miles a day and another 70-year-old who barely has the strength or endurance to perform life's daily tasks do not belong in the same class.

The Basic Exercise Program

Whatever the mode of exercise, a program must include work on cardiovascular endurance, strength, flexibility, balance, and coordination. These components of fitness will improve among the elderly just as they do for any other age group if the activities are performed with the appropriate frequency, duration, and intensity. Cardiovascular endurance is an important facilitator for all aspects of daily living as well as for working on other fitness components. Therefore, we generally structure a session around activities that promote cardiovascular endurance and incorporate other activities where convenient. A typical hour-long class, for example, begins with a 10-15 minute warm-up, followed by 15-20 minutes of aerobics and another 20-30 minutes of strength and flexibility exercise, and ends with a relaxation period.

Preventing Injury

Although all aspects of fitness can be improved with exercise regardless of age, the older adult seems to improve more slowly. Care must be taken to begin at a low level of intensity and progress gradually. It may take several months or more to work up to 20-30 minutes of aerobics. Many older people are not used to such intensity and will

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find the perspiration and breathlessness unfamiliar and uncomfortable in the beginning. Exercise to build strength in muscles, tendons, ligaments, and bones must also progress gradually to avoid undue discomfort or injury. Significant improvements in bone strength take 4-6 months. Too much too soon increases the probability of damaged joints and fractures.

Instructors of a senior exercise group must be certified in CPR and knowledgeable in exercise physiology, first aid, proper exercise techniques, and injury prevention. A great deal of attention should be devoted to teaching proper body alignment; the importance and techniques of warming up and cooling down; and the use of appropriate shoes, clothing, and exercise equipment.

For group classes, a safe and appropriate space is very important. Ambulatory groups need a resilient wood floor that will reduce stress to the joints. A high ceiling is also helpful so that balls and other toys can be used. The type of floor is not relevant to a group confined to chairs, but the safety and availability of the chairs is very important. Because older adults often have difficulty seeing and hearing and because they get cold easily, they need a well-lighted, warm exercise space with good acoustics.

Making Exercise Fun

Maintaining compliance in an exercise program for the elderly is a great challenge. Supervised programs frequently lose 50 percent of their participants in the first 6 months. The most successful general activity sessions offer variety, self-expression, socialization, individual feedback, and, above all, fun. In these programs, exercise needs are met through a variety of activities including dance (ballroom, folk, square, or creative); fitness and game activities; and floor, standing, or chair exercise. Depending upon the group, even activities such as biking, hiking, backpacking, and other comparatively arduous activities can be appropriate and successful. "Toys" are always a big hit; they distract people from the difficulties of the exercise while improving neglected motor skills. We have successfully used scarves, gymnastic ribbons, playground balls, surgical tubing, yarn balls, frisbees, wrist and ankle weights, and dumbbells.

The most important element after a variety of enjoyable activities is the social spirit of the class. A class situation increases the older adult's opportunities for social contact. Making new friends encourages adherence by providing a reason to come to class and creating a feeling of mutual obligation. A relaxed atmosphere and activities that help the participants become acquainted facilitate this process. The leader should take the time to learn each of the participants' special needs and interests and provide individual feedback. A dynamic leader with a good sense of humor will promote excitement and pleasure among the group. Probably no other age group is more appreciative of a good class and leader and more committed to a program once they have seen its worth.

Everyone, regardless of age, can benefit from exercise. Whether confined to a bed or chair or ready for the Senior Olympics, older adults can maximize their bodies' potential through a properly designed exercise program. We have focused upon group sessions because we are most familiar with them. However, many states and communities are using other promising programs to meet the needs of their senior citizens. Regardless of the program, regular exercise can reduce the risk of certain diseases and can help maintain independence. In so doing, it improves the quality of life at any age.

For further information, contact: Marianne M. Shea, M.S., or Everett L. Smith, Ph.D./Biogerontology Laboratory/Department of Preventive Medicine/University of Wisconsin/504 Walnut Street/Madison, Wisconsin 53705.

FOOTNOTES

[1] Shephard RJ. Physical activity and aging. Chicago: Year Book Medical Publishers, 1978.

[2] Raab DM, Smith EL. Exercise and aging effects on bone. Top Geriatric Rehabil 1985;1(Oct):31-9.

SUGGESTED READING

Corbin DE, Metal-Corbin J. Reach for it! A handbook of exercise and dance activities for older adults. Dubuque, IA: Eddie Bowers Publishing Co., 1983.

Smith EL, Gilligan C. Physical activity prescription for the older adult. Phys Sportsmed 1983;11:91-101.

Smith EL, Serfass RC. Exercise and aging: the scientific basis. Hillside, NJ: Enslow Publishers, 1981.

EXERCISE FOR SCHOOL CHILDREN

by Robert P. Pangrazi, Ph.D.

One of the areas for concern in America today is the decline of physical fitness among children. Few can debate the fact that the school environment is not providing enough activity to develop adequate fitness among our youth. Studies have consistently demonstrated that during the school day children do not voluntarily engage in high-intensity activity (exercise that elevates the heart rate above 160 beats per minute). Similarly, children do not voluntarily participate regularly in activities that promote muscular strength, an important ingredient for success in physical activities and sports. Therefore, schools that fail to offer physical education programs that enhance cardiovascular and strength development are shortchanging youth in the area of health and wellness.

A balanced physical fitness program should provide (1) an understanding that maintenance of physical fitness is the responsibility of each student, (2) an understanding of how fitness is developed, (3) an awareness that fitness is a

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part of wellness, and (4) a sound fitness development program as part of each session.

Basic principles must be followed so that fitness programs for children will be safe and beneficial. Progression is a vital concept to remember. Keep initial demands low and gradually increase the workload. To allow for differing capacities, organize activities so children do not have to start and finish at the same time. Begin the year with low demands so that everyone experiences success. Children vary tremendously in physical capacity, and one of the most effective ways of turning them off to exercise for a lifetime is to ask them to perform beyond their ability.

The behavioral pattern that is the final goal can be easily recalled by the acronym FIT—Frequency, Intensity, and Time. *Frequency* is the number of times per week fitness activities should be performed—three times is the minimum. *Intensity* of cardiovascular exercise can be monitored by teaching children to check their heart rate—the training rate is reached when the heart rate is elevated over 160 beats per minute and should be maintained for a minimum of 10 minutes. *Time* is the length of each exercise bout—a typical physical education period is 30 minutes long, and at least 10 minutes of the period should be devoted to activity that elevates the heart rate into the training zone previously described.

Finally, children should be offered a variety of fitness activities. Youngsters often tire of the same activities, and it is well established that motivation decreases when children become bored. Children should learn that there are many "paths to fitness" and that no single type of exercise is best for all people. They need to learn a number of exercise techniques as well as how to modify each to ensure fitness benefits.

Suggested Fitness Activities

1. *The Random Jogging Program is one of the easiest approaches that can be administered on a schoolwide basis.* Release children from class to run with a friend. Allow them to select a friend of equal ability and randomly jog throughout the playground. The teacher can time the duration of the session and signal when students are to return to the classroom. If desired, allow a 2-minute cool-down period of walking. Start the program by asking youngsters to jog/walk for 4 minutes. Each week the time can be increased by 1 minute until students are jogging for 10-12 minutes. Students can walk if necessary, but they should not simply stand.

2. *Set up a number of exercise trails on the playground.* Trails should be of differing lengths so students can increase their workload as their fitness levels improve. Encourage them to keep track of their "mileage" by recording it on a class chart.

3. *Move across the USA by posting a map of the country in the classroom.* Each day, combine the miles for all students and plot the distance on the map. This brings the class together for a common cause, and all can feel that they are contributing.

4. *Set up a large clock with a second hand in the playground area so students can learn to monitor their heart rate.* Encourage them to maintain the training heart rate for 5-10 minutes prior to participation in typical recess activities. Typical recess activities are usually characterized by short bouts of activity followed by long rest periods. Encourage activities that demand longer bouts of activity (e.g., soccer, team handball, and tag games).

5. *Develop a fitness course using playground equipment.* Most playgrounds have chin-up bars, monkey bars, climbing equipment, and parallel bars. Organize a red, white, and blue circuit with each color indicating a greater workload. Develop the circuit so youngsters have to run after each strength development exercise.

6. *Develop an after-school fitness club.* A great deal of time and energy is spent on developing sport programs for children even though the large majority of students do not possess the genetic traits to be outstanding athletes. In a fitness club every student, regardless of talent, can improve his/her level of physical fitness. The club should focus on fitness gains and teach a large number of aerobic activities, i.e., bicycling, hiking, power walking, cross-country running, and rope jumping. Students can learn to get fit in order to play sports in contrast with the typical pattern of playing sports with the hope (usually unrealized) of developing physical fitness.

7. *Conduct a health related physical fitness day.* This designated day could be part of a total wellness workshop. Invite experts in the area of drug and substance abuse, alcohol awareness, stress reduction, and nutrition to set up displays and offer presentations to students. The presentations should include physical fitness testing and interpretation of results. The American Alliance of Health, Physical Education, Recreation and Dance recommends the following test items and has established norms for them: (1) a 1-mile run/walk for measuring cardiovascular fitness, (2) sit-ups for measuring abdominal strength, (3) a sit-and-reach test for evaluating lower-back flexibility, and (4) skinfold measurement for evaluating body composition. The test results can be sent home to parents along with the results of other evaluated items such as hearing, vision, blood pressure, and dental health. This "wellness profile" communicates potential health problems to parents and can often be the source of a strong public relations program.

8. *Establish a physical fitness self-testing program that teaches students how to evaluate their personal fitness.* For example, if the test items above were used, students would learn how to test cardiovascular fitness, abdominal strength, and lower-back flexibility and how to use skin calipers in evaluating body composition. Norms can be posted so students can see how fit they are compared with other students their age.

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Exercise for School Children From page 11

In summary, a physical fitness program should focus on teaching students to assume responsibility for their personal fitness levels. Too often students are simply told what to do by an instructor. They come away with the feeling that others are responsible for their fitness maintenance. Instead, students should be taught independence in their quest for a lifetime of fitness.

For further information, contact: Robert P. Pangrazi, Ph.D./Professor, Chair, Department of Health and Physical Education/Arizona State University/Tempe, Arizona 85287.

SUGGESTED READING

American Alliance for Health, Physical Education, Recreation and Dance. Health related physical fitness test manual. Reston, VA: AAHPERD, 1980.

Dauer VP, Pangrazi RP. Dynamic physical education for elementary school children. Minneapolis: Burgess Publishing, 1983.

The national children and youth fitness study (12 papers). J Health Physical Educ Recreation Dance 1985;56(no 1):44-90.

EXERCISE PROGRAMS AT THE WORKSITE

by Todd Rogers, Ph.D., and Steven N. Blair, P.E.D.

Worksite exercise programs have grown rapidly over the last 15 years. Company recreation departments have been in existence for decades, but in the late 1960's and early 1970's many companies went a step further and established substantial physical fitness programs. While these efforts have been beneficial, it is clear that worksite programs based on exercise alone are incomplete.

Thus, while most programs emphasize physical fitness and are run by individuals from the exercise field, many programs have been expanded to include weight loss, stress management, and other topics. The modern employee health promotion program should take an even broader public health view and include topics frequently neglected, such as women's health issues, safety, and substance abuse. Exercise is only one of several areas worthy of emphasis, and it need not be the primary focus. Having made these general comments, we will focus our discussion on planning and developing a successful worksite fitness program. Similar steps are also appropriate for other health promotion topics.

Among the first things that program personnel should do is determine what management expects from the program. A program that is targeted at reducing absenteeism and the cost of employee medical claims and increasing productivity requires a very different attitude, design process, and evaluation plan than one aimed at improving exercise habits, physical fitness, and morale. Of course, managers who expect meaningful change in the "bottom line" variables should also expect to provide more evaluation resources than they would for a program with less ambitious goals.

Matching the needs and interests of potential participants with available resources is also necessary early in the planning process. Program personnel should develop and administer a brief needs-assessment questionnaire to find out what employees are interested in and what they would expect from a fitness program. The collected data will help determine whether the participants' needs can be met by existing resources (space, equipment, personnel, etc.) or whether additional resources are necessary. The Exercise Program Coordinator's Guide published by the American Heart Association as part of its *Heart At Work* program kit contains an excellent example of a simple needs-assessment instrument. This instrument allows program personnel to tailor a fitness program to the specific needs of the employee-participants within the restraints of available resources.

There is some concern about whether worksite fitness programs are indeed meeting the needs of certain groups of employees such as blue collar workers. Much more research is needed to better understand the relationship of socioeconomic status (SES) to health behavior change, but some encouraging results are available. For example, the highly significant improvements in exercise habits and physical fitness among participants in Johnson and Johnson's comprehensive *Live for Life* worksite health promotion program were noted in all sociodemographic groupings. These findings are encouraging because they suggest that health behavior change is not limited to upper SES groups when a broad public health approach to intervention is adopted. As suggested by Baranowski et al. in this issue, the worksite may be one of the most useful locations for promoting appropriate physical activity patterns among lower socioeconomic groups.

Determining resource availability is another important developmental task. Programs with the limited goal of increasing the level of employee awareness, knowledge, or self-directed fitness activities may be appropriate at some worksites. For these rudimentary programs, resource needs are minimal and can include low-cost or free materials from voluntary health agencies, guest speakers from local educational or health-care institutions, or special promotional events. In contrast, more involved programs, which include activities designed to teach and maintain behavioral skills, require more financial and personnel resources. Neither extreme is better than the other. Health promotion is best looked upon as a *process* in which individuals and organizations evolve through various stages of development.

Staffing for a worksite exercise program is an important and complex issue, and there are many acceptable alternatives. Some programs simply subsidize employee memberships at the YMCA, YWCA, or other exercise facilities.

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Other programs establish an onsite exercise facility. Generally speaking, onsite exercise facilities should be staffed with qualified exercise leaders who have professional training in exercise science, preferably with a master's degree. One way to ensure that exercise leaders are qualified is to hire individuals certified by the American College of Sports Medicine as exercise specialists, health fitness program directors, or health fitness instructors. These people have demonstrated competence in exercise testing, programming, and leadership by completing rigorous written and practical examinations.

Motivation is an important issue for all exercise programs. There is a vast difference between *starting* an exercise program and *maintaining* behavior change. In many programs, initial enthusiasm wanes, and attitudes turn from positive to negative. Research and experience over the past several years have produced strategies for encouraging people to enroll in exercise programs and to continue with them. Popular "opinion leaders" can serve as role models for other employees. Special promotions, tangible and social incentives, and rewards for program participation and individual success are also effective. Some or all of these kinds of activities should be included in every worksite exercise program. Dr. Saltis discusses the problem of program adherence in greater detail elsewhere in this issue.

Finally, there is the issue of evaluating the participants and the program. Evaluating program participants (e.g., fitness testing and exercise prescription) has become an industry in itself. Dr. Shephard's paper in this issue gives advice on medical screening prior to starting to exercise. While most individuals (excluding those with known medical problems) can safely begin a moderate exercise program by starting at a low level and progressing slowly, employees should be taught to recognize physical danger signals and should know when to seek medical advice.

Program evaluation can take many forms, including (1) *formative evaluation*, which focuses on program design and development issues, such as the use of a needs assessment; (2) *process evaluation*, which looks at program implementation and quality assurance; and (3) *outcome evaluation*, which concentrates on changes in areas ranging from participant variables (e.g., behavioral, physiological, psychosocial variables) to economic or other organizational variables.

Windsor et al. provide a comprehensive review of evaluation for health promotion programs, including a discussion of cost-effectiveness and statistical analysis procedures (see Suggested Reading). We feel, however, that program personnel who are struggling to stretch limited resources to support intervention activities are often overly concerned with outcome evaluation. In our opinion, the vast majority of worksite health promotion programs, especially those with minimal management expectations, should use program evaluation only for motivating individuals to participate or for providing program personnel with information that can help improve the program itself.

For further information, contact: Todd Rogers, Ph.D./Director, Behavioral Science and Health Promotion/Institute for Aerobics Research/12330 Preston Road/Dallas, Texas 75230.

SUGGESTED READING

American Heart Association. Exercise program coordinator's guide for "Heart at Work" kit. Dallas: American Heart Association, 1984.

Blair SN, Piserchia PV, Wilbur CS, Crowder JW. A public health intervention model for worksite health promotion: impact on exercise and physical fitness in the Live for Life program after 24 months. JAMA, in press, 1986.

Iverson DC, Fielding JE, Crow RS, Christenson G. The promotion of physical activity in the U.S. population: the status of programs in medical, worksite, community, and school settings. Pub Health Rep 1985;100:212-24.

Parkinson RS and Associates. Managing health promotion in the workplace: guidelines for implementation and evaluation. Palo Alto, CA: Mayfield Publishing Co., 1982.

Pate RR, Blair SN. Physical fitness programming for health promotion at the worksite. Prev Med 1983;12:632-43.

Windsor RA, Baranowski T, Clark N, Cutter G. Evaluation of health promotion and education programs. Palo Alto, CA: Mayfield Publishing Co., 1984.

EXERCISE AND FITNESS PROGRAMS OF THE PRESIDENT'S COUNCIL ON PHYSICAL FITNESS AND SPORTS

by Ash Hayes, Ed.D.

For 30 years, the President's Council on Physical Fitness and Sports has been responsible for leading the Federal Government's efforts to educate and motivate the public to live more active, vigorous lives. Programs have concentrated on making the concept of a healthier, more physically fit America a reality.

Each administration since 1956 has believed in the importance of physical fitness and has given the Council responsibility for developing and coordinating efforts to highlight this priority. Since 1980, the Council has been the lead agency for monitoring the 1990 Physical Fitness and Exercise Objectives and has had a key role in coordinating and promoting government and private programs. The Centers for Disease Control was designated Science Coordinator for these objectives in 1985.

The Council is comprised of 15 private citizens appointed by the President and aided by a staff of 7 professionals who provide technical and motivational support and program materials.

The Council works with Congress; the Administration; federal, state, and local government agencies; volunteer organizations; private enterprise; civic groups; and individual citizens. The end result is a great variety of programs

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and activities for various populations throughout the country. A few of these projects are summarized below.

Each year a *public information campaign* is designed to address a different theme. The current emphasis is youth fitness, and materials have recently been sent to 4,150 radio and 800 television stations. A bimonthly newsletter, posters, brochures, and handouts are available from the Council office in limited numbers with bulk quantities for sale through the U.S. Government Printing Office.

The *Presidential Physical Fitness Award* has recognized exceptional physical achievement among students ages 10-17. The 1986-87 school year will mark the first time that Presidential recognition will be awarded to youngsters ages 6-9. Promotional materials are sent to all schools each October. Students in good standing who score at or above the 85th percentile on the American Alliance for Health, Physical Education, Recreation and Dance Youth Fitness Test are eligible for the award.

The *State Champion Award Program* recognizes outstanding school physical fitness programs. The award is given annually in each state to the three schools, each representing a different enrollment category, that qualify the highest percentage of eligible students for the Presidential Physical Fitness Award.

The *State Demonstration Center Program* identifies the highest quality physical education programs in the country. The criteria for selecting these programs are developed by each state's department of education and approved by the Council. State Demonstration Centers serve as referral sites for domestic and foreign visitors.

The *FITNESSGRAM* is a computerized report card designed to give students, teachers, and parents a fitness profile of each child.

The *Presidential Sports Award* recognizes regular involvement in any of 43 qualifying sports and activities. Men and women 15 years of age and older can qualify for this award by meeting the standard established for each sport.

In 1981, the *Federal Interagency Health/Fitness Council* was established to promote fitness programs at the federal worksite. Members represent federal employee fitness programs and meet quarterly. A FIT-KIT is available from the Council to help agencies initiate or improve their fitness/health programs.

Regional clinics on physical fitness and sports are held regularly to bring new ideas, information, and techniques to fitness and recreation leaders, school teachers, recreation leaders, and others interested in updating their teaching methods and curricula. Since 1962, more than 100 2-day clinics have been held at schools and universities around the country.

National Conferences are held periodically to address issues of public significance such as fitness and aging, youth fitness, sports medicine, and the role of women in promoting health and fitness. Proceedings are printed and distributed to attendees and others in the field.

Each year, 10 individuals are given the *Healthy American Fitness Leader Award* for their personal example and outstanding leadership in promoting physical fitness.

By Presidential Proclamation, every May is declared *National Physical Fitness and Sports Month*. More than 10,000 packets of promotional materials are sent out from the Council in January to help fitness directors and program planners prepare for their May Fitness Month events. The celebration is funded primarily by the private sector at the national and local levels. ⊕

For further information, contact: Ash Hayes, Ed.D./Executive Director, President's Council on Physical Fitness and Sports/450 5th Street, NW./Washington, DC 20001.

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OHIC NEWS

The Office of Disease Prevention and Health Promotion (ODPHP) sponsors the ODPHP Health Information Center (OHIC) as a central source of referral for health questions. The OHIC (formerly the National Health Information Clearinghouse) operates a toll-free number for public access to health information, publishes resource lists, and distributes publications. To contact the OHIC, call (800) 336-4797 (toll-free) or (202) 429-9091 (in the District of Columbia) or write to the ODPHP/PHIC, P.O. Box 1133, Washington, DC 20013-1133.

Exercise Resources

OHIC referral specialists receive inquiries on a myriad of topics, including exercise. A search of the OHIC database yields several interesting resources, including:

- The President's Council on Physical Fitness and Sports, 405 Fifth Street NW., Suite 7103, Washington, DC 20001; (202) 272-3430. The Council prepares educational materials and cooperates with government and private groups to promote the development of facilities and programs for fitness. Its booklets on "Aquadynamics," "Walking," and other topics are detailed guides to getting started on exercise programs.
- The American Alliance for Health, Physical Education, Recreation and Dance, 1900 Association Drive, Reston, VA 22091; (703) 476-3488. A voluntary association, the Alliance publishes booklets and teaching guides and, among other activities, sponsors an exercise program called "Jump Rope for Heart."

OHIC referral specialists also can tell inquirers about other, not-so-obvious organizations that provide information on exercise, such as:

- The National Heart, Lung, and Blood Institute, Building 31, Room 4A-21, 9000 Rockville Pike, Bethesda, MD 20892; (301) 496-4236. This component of the National Institutes of Health publishes several fact sheets on exercise that separate fact from fiction and give sample programs.
- The American Heart Association. Local Heart Associations are a source of educational materials on exercise, including the booklet "Exercise and Your Heart."

The OHIC has compiled a resource list on "Exercise for Older Americans" as part of its *Healthfinder* series of guides to information sources. This list describes materials for older people wanting to start an exercise program as well as for health professionals working with older people. Here are a few sample entries from this *Healthfinder*.

- *Exercise for People with Arthritis,* Arthritis Information Clearinghouse, P.O. Box 9782, Arlington, VA 22209; (703) 588-8250. Lists books and pamphlets with information on exercises for people with arthritis. Most of the materials are geared to the needs of the many older Americans who must live with the disease. 1983, 2 pp., free.
- *Fitness for the Aging Adult with Visual Impairment: An Exercise and Resource Manual,* by Mary Alice Ross; American Foundation for the Blind, Inc., 15 West 16th Street, New York, NY 10011; (212) 620-2000. Designed for exercise program instructors. Features verbal cues for exercise programs for the visually impaired. The emphasis is on muscle toning and stretching. Identifies exercises that can be done while sitting in a wheelchair. 1984, 84 pp., $9.50.
- *Pep Up Your Life: A Fitness Book for Seniors,* by Travelers Companies; One Tower Square, Hartford, CT 06183; (203) 277-2303. Outlines different levels of exercises for strength, flexibility, and endurance. Can be used with a film, "The Good Life," available on loan from Travelers. 33 pp., free.

Other Resources

Several other publications of interest to health educators are now available:

- *Toll-Free Numbers for Health Information* is a *Healthfinder* guide describing the information available from current 800 numbers operated by both government and private health organizations. Those interested in women's sports, for instance, can call the Women's Sports Foundation at (800) 227-3988.
- *Medications: Sources of Information,* a recently updated *Healthfinder,* is a guide to books, pamphlets, and patient information leaflets on drugs.
- *Rare Disease: A Resource Directory* was prepared by the National Information Center for Orphan Drugs and Rare Diseases. From the Acoustic Neuroma Association to the Wilson's Disease Association, this directory describes the services, activities, and publications of over 150 voluntary organizations and government agencies concerned with rare diseases. It is for sale from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161, for $16.95 (paper), $5.95 (microfiche). Refer to order number PB86-180262AS.

Upcoming Health Observances

Health observances are specific months, weeks, and days devoted to the promotion of particular health topics. A complete list of health observances for 1986 and the organizations sponsoring them is one of the *Healthfinder* resource lists and is available from OHIC. Program planners who want to consider activities related to a particular health observance can contact these sponsoring organizations for materials to assist in organizing programs.

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EDITORIAL COMMENTARY BY GARY GOLDBAUM, M.D.[1]

Occupant Restraints: The Health Educator's Perspective

Motor vehicle collisions (MVC's) kill and maim. Injuries from motor vehicle collisions are the fourth leading cause of death in the United States. In 1985, 43,795 people died on American highways. Of these, 23,198 were occupants of passenger vehicles (the remainder were pedestrians, cyclists, and occupants of nonpassenger vehicles). Over one-third of these fatalities occurred to persons under 25 years old, a fact that makes MVC-associated mortality the leading cause of death among people between the ages of 5 and 24. In addition, injuries from MVC's accounted for more than one-fourth of occupational injuries.

Motor vehicle collisions also drain financial resources. The estimated direct and indirect costs of injuries due to motor vehicle collisions exceeded $17 billion for 1980. Of the estimated $33 billion in direct and indirect costs for occupational injuries in 1984, $11 billion was attributable to MVC injuries.

Since 1974, the Federal Government has required that all cars be equipped with seat belts. Until recently, however, there have been no viable incentives for people to use these devices. As a result, few people have buckled up routinely. Before 1984, most studies revealed that only 12 to 14 percent of drivers and passengers wore seat belts.

Laboratory experiments and field experience suggest that more than half of highway fatalities could be prevented if everyone used safety restraints while riding in a motor vehicle. Indeed, deaths of children riding in cars could be virtually eliminated if all children were *properly* restrained.

The fact remains, however, that most people do not use seat belts. And, despite the existence of child restraint use laws in all 50 states and the District of Columbia, most children are not *properly* restrained. In 1983, the Department of Transportation addressed part of the problem by

FOOTNOTES

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(See Editorial Commentary, page 2)

Do Incentive Programs for Safety Belt Use Work?

by David A. Sleet, Ph.D., and E. Scott Geller, Ph.D.[1]

In 1978, Congress directed the Secretary of Transportation to investigate methods of encouraging drivers and passengers to use safety belts. These methods could include, but were not limited to, various types of financial incentives and disincentives.

In the National Academy of Science study that followed, four program areas for increasing safety belt use were identified: (1) prescriptive approaches such as legislation and policy; (2) approaches in the private sector such as the development and promotion of automatic protection, (3) strategies designed to change public perceptions such as public education and awareness, and (4) incentive approaches that would reward safety belt use. This paper discusses the latter approach: the use of incentives.

Providing incentives for wearing safety belts or using child safety seats has been one of the more effective methods for encouraging occupant protection in schools and communities and at worksites. Yet, only about 2 percent of all industries surveyed and fewer community health programs have ever tried incentive strategies to increase voluntary use of safety belts and child safety seats. The absence of strong incentives has prevented many safety belt programs from achieving greater success.

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requiring automobile manufacturers to install passive restraints in new cars, unless states enacted laws requiring seat belt use. Twenty-six states and the District of Columbia have enacted such laws. The experience to date has been both positive and disappointing. In New York, the first state to enact a mandatory use law (MUL), the prevalence of observed seat belt use increased from 16 percent before the law took effect to 57 percent 3 months afterwards. Occupant fatalities decreased 15 percent that first year. However, the prevalence of seat belt use has subsequently declined to 46 percent. Similar patterns have been observed in other states. Laws are helpful, but not sufficient.

Safety laws are made to protect human lives; that goal is best realized when laws are complemented by well conceived health education efforts and an effective enforcement plan. For example, in Elmira, New York, a campaign to publicize and vigorously enforce New York's MUL increased the seat belt use considerably. Following the campaign, seat belt use stabilized at a level substantially higher than the New York State and national averages.

Because health education is essential to the success of mandatory use laws, we are offering this issue of *Focal Points* as a resource for field practitioners faced with the task of encouraging the proper use of safety restraints. Articles by Sleet and Geller and by Domin-Osterhuber provide useful ideas on educational programs, especially the use of incentives; Adduci, Williams, and O'Neill give important insights into laws and legislation. Biddle has put together a list of agencies and groups that provide a wide range of resources for developing programs that promote seat belt use.

Finally, we have included information that we hope will contribute to a better understanding of the controversy surrounding the much publicized report by the National Transportation Safety Board (NTSB) on rear-seat lap-belt use. We have included excerpts from the NTSB report followed by excerpts from the National Highway Traffic Safety Administration's (NHTSA) formal response to that report.

There is needless death and injury on U.S. highways, and we must not allow the importance of that fact to be minimized. All of us have a contribution to make.

Focal Points is a publication of the Division of Health Education, directed by Marshall W. Kreuter, Ph.D. Your comments are invited and should be addressed to either the Editor or Managing Editor at the addresses below:

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Incentive Programs for Safety From page 1

The success of the positive reinforcement inherent in an incentive system depends on both the size and frequency of rewards. Unfortunately, safety belt use, in itself, offers no immediate reward. On the contrary, many people feel uncomfortable in safety belts and find them inconvenient to use. Buzzers and dashboard lights, intended to act as cues to belt use, are frequently more annoying than helpful. More pleasant cues, such as chimes or voice reminders, are easily ignored or disregarded. What is needed is an incentive that motivates drivers and passengers to buckle up and rewards them when they do so, at least until safety belt use becomes a habit.

Three incentive systems are discussed here: (1) insurance incentives, (2) legislative incentives, and (3) individual/group incentives.

Insurance Incentives

Several insurance companies and one automobile manufacturer have offered increased coverage or compensation. For example, Nationwide Insurance Company presently provides "safety belt bonus" coverage that pays double compensation if the insured is injured in a crash while belted and an extra $10,000 death benefit for belted policyholders. General Motors Corporation offers a 1-year insurance certificate to anyone buying a new GM car, light truck, or van in the U.S. The certificate states that General Motors will pay a $10,000 death benefit to the estate of any person killed in a crash while traveling in one of these vehicles—provided that person was wearing a GMC seat belt.

However, there is no evidence that increased death benefits or injury compensations increase safety belt use. To be effective, incentives must be related to safety belt use itself, not to a crash. Further, the reward should be provided immediately. If individuals will not buckle up to save their own lives, why should they buckle up on the remote possibility that their death will provide their beneficiaries with a $10,000 benefit?

Focus group research has determined that a premium reduction of $80 to $120 per year would be necessary to induce policyholders to wear belts. According to insurance statistics, safety belt use would create only enough savings on annual payouts to allow premium reductions of $11 to $42 on an auto insurance policy; $8 on an average life insurance policy; and $32 to $54 on a family health insurance policy. Since these reductions would be insufficient to motivate increased belt use, supplemental incentives would be necessary.

Legislative Incentives

Activity designed to stimulate increased belt use at the state and local level has been influenced by federal economic incentives. In 1973, incentive grants were authorized to those states adopting seat belt legislation, with additional bonuses going to states that achieved the most

(See Incentive Programs for Safety, page 3)

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dramatic reductions in fatality rates. The Commonwealth of Puerto Rico passed such a law, effective January 1, 1974, and became the only recipient of the incentive award. Although more than 30 states introduced safety belt use legislation, none of them passed these laws before the incentive grant program was discontinued.

Then, in 1978, Congress required the states to earmark at least 2 percent of their federal highway development funds for programs encouraging safety belt and child safety seat use. By 1982, the states had voluntarily dedicated nearly 4 percent and, by 1983, nearly 7 percent of their highway funds to safety belt and child safety seat programs. In 1984, Congress increased the minimum apportionment for safety programs to 8 percent.

Individual/Group Incentives

Individual and group incentive programs have been especially effective in obtaining rapid increases in safety belt use. A number of approaches have been used including: (1) an immediate reward of money or prizes to persons observed wearing their safety belts; (2) rewarding belt wearers with chances to participate in lotteries for grand prizes; (3) awarding prizes to each member of a group when target levels of safety belt use have been achieved by the group; (4) asking members of a group to sign pledge cards promising that they will wear safety belts for a specified period of time.

These approaches have been studied at worksites and in communities. Generally, belt use was observed before, during, and after the incentives were announced. Daily records of belt use were kept throughout each program, and results were posted or announced so participants received feedback. To determine long-range impact, observations were continued after each program was formally terminated. Incentives ranged from luxury automobiles to small items like key chains, coupons redeemable by local merchants, and access to convenient parking. Most prizes were donated by merchants or purchased by employers, union groups, or school districts.

Research at the worksite showed that salaried employees were more influenced by incentives than hourly employees. Peer pressure (generated when individuals were rewarded only when the group reached a specified belt-use level) was especially effective. Written pledges to wear safety belts were particularly cost-effective in certain situations. Strategies to maintain use over time included random surveys of belt use; display of use rates and progress toward meeting goals; and unannounced but frequent drawings, awards, and personal commendations to belt users throughout the year.

At school, in the community, and at the worksites, the use of incentives doubled and nearly tripled safety belt use over baseline rates (see accompanying table). Generally, the higher the odds of winning a prize and the more frequently the rewards were given, the more motivated people were to participate over the long term. When safety belt use rewards were discontinued, belt use decreased substantially, but still remained above baseline levels. However, in several instances, high use rates were maintained with only occassional rewards. Overall, experience indicates that compliance rates between 25 to 85 percent belt use should be expected from well-designed incentives programs.

Results of Some Incentive Programs for Increasing Safety Belt Use

Population	Location	Mean Belt Use Observed		(%) Followup*
		Baseline	Incentive	
School	Virginia Tech Univ. (VA)[2]	18	36	27
	Chapel Hill High School (NC)[3]	20	51	36
Worksite	Berg Electronics (PA)[4]	45	90	90
	US Dep't. Transportation (DC)[5]	22	60	54
	General Motors (MI)[6]	36	70	60
Community	Chapel Hill/ Carrboro (VA)[7]	24	34	36
	Jackson (MS)[8]	6	12	14

* 3- to 9-month followup observation period.

The following points summarize what is known about incentive programs for increasing seat belt use:

1. Incentive (reward) strategies are more effective than disincentive (punishment) strategies in motivating belt use.
2. Incentive programs offering inexpensive prizes, awards, special privileges, and recognition usually result in a cost-effective increase in safety belt use.
3. Incentives have a longer-lasting effect on belt use when rewards are given intermittently over the long term.
4. Programs including safety belt education along with incentives have better results than either method used alone.

(See **Incentive Programs for Safety**, page 4)

Incentive Programs for Safety From page 3

5. The most effective educational programs involve participants in active discussion about the value of safety belt use, as opposed to programs in which the participants passively watch a film or listen to a lecture.
6. The success of an incentive program is not dependent upon immediate rewards. Delayed drawings of safety belt pledge cards also significantly increase safety belt use.
7. Ideally, participants should be rewarded for actually observed belt use. Rewards can also be based on self-reported use, although this approach is less reliable.
8. The long-term effects of incentives on safety belt use are unknown. It is recommended, however, that a program not terminate until the safety belt use habit has been firmly established.
9. Family involvement in an incentive program (e.g., by sending prize catalogs home with employees) can lead to higher safety belt use.
10. The best results come from a combination of both individual and group rewards. ⊕

For further information, contact: David A. Sleet, Ph.D., Professor/Department of Health Science and Graduate School of Public Health/Division of Health Promotion (Injury Control Research Branch)/College of Health and Human Services/San Diego State University/San Diego, CA 92182/(619) 265-6317.

FOOTNOTES

[1]Dr. Geller is a professor in the Department of Psychology at Virginia Polytechnic Institute and State University in Blacksburg, Virginia.

[2]Rudd JR, Geller ES. A university-based incentive program to increase safety belt use: toward cost-effective institutionalization. J Appl Behav Anal 1985;18:215-26.

[3]Campbell BJ, Hunter WW, Stutts JC. The use of economic incentives and education to modify safety belt use behavior of high school students. In: Lawson D, Sleet D, Amoni M, eds. Automobile occupant protection: an issue for health educators. Health Educ 1984;15(5):30-30.

[4]Spoonhour KA. Company snap-it-up campaign achieves 90 percent belt use. Traffic Safety 1981;September/October:18-9,31-2.

[5]Spielberger A. Safety belt promotion program for headquarters employees. Washington, DC: National Highway Traffic Safety Administration, 1984; document no. DOT HS 806 625.

[6]Horne TD, Terry T. Seat belt sweepstakes—an incentive program. Warrendale, PA: Society of Automotive Engineers, 1983; SAE technical paper series no. 830474.

[7]Gemming MG, Runyan CW, Hunter WW, Campbell BJ. A community health education approach to occupant protection. In: Sleet DA, ed. Occupant protection and health promotion. Health Educ Q (special issue) 1984;11(2):147-58.

[8]Long ND. Increasing community use of safety belts. Paper presented at the Governor's 1983 Conference on Highway Safety, Charleston, SC, November, 1983.

SUGGESTED READING

Geller ES, Johnson RP, Pelton SL. Community-based interventions for encouraging safety belt use. Am J Community Psychol 1982;10:183-95.

Safety-Belt Initiatives: Allentown, Pennsylvania

by Angela A. Domin-Osterhuber, Ed.M.

The large number of serious injuries caused by motor vehicle collisions has prompted the Bureau of Health of Allentown, Pennsylvania, to initiate several programs intended to increase the use of safety belts and child safety seats. During 1983-1985, the Bureau's programs focused on infants, high school students, and adults. Since 1985, the Bureau has focused on preschool through second grade children, fifth and sixth grade children, high school students, and adults.

In 1983, the Bureau's "Kids in Safety Seats" program made available 40 rental safety seats. City residents could rent the seats for 50 cents a month plus a $10 deposit, refundable upon return of the seat. To publicize the program, brochures in English and Spanish were distributed throughout the city, and news releases were placed in local papers. The Bureau of Health continues to familiarize parents with the program during Childhood Injury Prevention Home Surveys. Parents coming into the Bureau to rent a car seat are instructed in proper usage. Recently, the Pennsylvania Department of Transportation made 100 additional infant seats available. These seats will be used to increase the number of city residents served and to help other agencies begin "Kids In Safety Seats" programs.

To further their efforts, the Bureau purchased a "Safety Belt Convincer" as an educational aid. The Convincer, a device that simulates a crash at 10 miles-per-hour, is available to community groups, businesses, and schools. In addition, the Convincer has been demonstrated at Health Fairs and mass gatherings within the city.

Safety belt programs in the city's high schools have consisted of film presentations and a demonstration of the Convincer. With the cooperation of the Department of Transportation, additional safety belt presentations were made by Toney Lineberry at high schools in Lehigh and Northampton counties. Toney Lineberry is a quadraplegic whose permanent disability resulted from a motor vehicle collision in which he was not buckled up. His presentations are very effective.

To remind city residents to use their seat belts, approximately 100 "Buckle Up" signs were posted throughout the city at busy intersections, at main roads entering the city, and at the exits of major shopping centers. There are plans to post 100 additional signs during 1986. "Buckle Up" posters also were placed on the outside of 10 city buses for one month during the 1984 Fall Campaign.

Several observational surveys were conducted to assess the effectiveness of the Bureau's 1983-1985 programs. In September 1984 a survey conducted in Allentown showed that 24 percent of infants and toddlers were in child safety seats. After the child passenger restraint law went into effect in January of 1985, a survey indicated

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that 74 percent of infants and toddlers were using child safety seats. Subsequently, use of child safety seats has decreased to 43 percent.

In September 1984, a survey conducted in Allentown showed that 12 percent of front seat passengers wore safety belts. As a result of the Bureau's promotional activities and periodic news releases, safety belt usage increased to 18 percent by January of 1985. A followup survey conducted in September 1985, indicated a drop in safety belt use to 16 percent, still above the baseline.

In November 1985, the Allentown Bureau of Health and the Lehigh County Chapter of the American Red Cross cosponsored the "All American Buckle Up" campaign. Awareness programs were scheduled in Allentown and Lehigh County; some have been extended through 1986. These programs focus on four different groups: children from preschool through second grade, children in the fifth and sixth grades, high school students, and adults.

National Highway Traffic Safety Administration materials were used in developing the preschool through second grade program. Prior to class presentations, the program is discussed with the classroom teachers, and they are encouraged to reinforce the importance of safety belt use. Each student's parents receive a safety belt fact sheet and a letter explaining the safety belt program. Hopefully, these materials will educate parents so they will reinforce the importance of safety belts and possibly begin to use safety belts themselves.

At this grade level, children are encouraged to think of using safety belts as a health habit, just as brushing their teeth and washing their hands are health habits. The core program, "We Love You—Buckle Up", is supplemented with activities from the program entitled "A Safer Day In Every Way". The instructor associate a stop light with wearing a safety belt. The stop light is explained in this way: When you get into the car, you stop (represented by the red light), you buckle up (represented by the yellow light), and then you go (represented by the green light). Each child is given a paper stop light as a reminder to buckle up. During the presentation, the children are taught the correct way to wear a safety belt. At the end of the program, a personal "Buckle Up Club" membership card is given to each child. Teachers are encouraged to conduct followup activities.

Using more materials available through the National Highway Traffic Safety Administration, program planners developed a similar curriculum for fifth and sixth graders. Again, there is a motivational meeting for teachers. During the classroom presentation, students are asked to identify safety devices on a car. These include the horn, side and rearview mirrors, and lights. Seat belts are identified as another safety device available in cars. Students also are required to complete a survey designed to determine how many students wear safety belts, whether they wear them all the time, and the reasons they give for not wearing them. A film entitled "Do You Buckle Up?" is then shown to the class. This film discusses the excuses commonly given for not buckling up. Classroom discussion follows.

To encourage teenagers to begin wearing safety belts, the Bureau of Health and the Red Cross challenged the high school students in Allentown and Lehigh County to develop and conduct safety belt programs within their schools. Five schools accepted that challenge, and student organizations in each school began designing the programs.

The Bureau of Health and Red Cross agreed to provide pamphlets, brochures, posters, speakers, educational materials, and any technical assistance necessary. The students were totally responsible for developing the activities, and the only requirement was that a survey be taken at the beginning of the program and then again at the end. The planning period for this project extended through January, and the program ran through May.

To encourage participation, all students who excelled in each department were assigned specific projects: those excelling in English developed flyers or wrote articles for the school newspaper; math students conducted the surveys and were responsible for the statistics, art students designed posters, history students researched the origins of seat belts and present legislation; students excelling in science conducted experiments relating to the dynamics of a crash. The students liked this approach because they were doing everything themselves, and the teachers appreciated the fact that they were not asked to add extra responsibilities to their already busy schedules.

To promote seat belt use among adults, the Bureau of Health conducted a media campaign during the 1985 Thanksgiving/Christmas holiday season. A local radio station reminded radio listeners to buckle up throughout the day and made public safety announcements promoting the use of safety belts and child safety seats. A local corporation placed pledge cards in the newspaper once a week for 6 weeks. The cards read: "I pledge to begin wearing a safety belt and to protect children by placing them in a child safety seat." Anyone agreeing to the pledge mailed in a pledge card and automatically entered a drawing that took place at the end of the 6-week campaign. It was the Bureau's hope that, over this 6-week period, wearing a safety belt would become a habit.

The programs that began in 1985 have not been evaluated yet. Unfortunately, dramatic results are not expected because resources have been limited. However, by building upon existing programs, we hope to influence more and more Allentown residents to use safety belts and child safety seats in the future.

For further information, contact Angela A. Domin-Osterhuber, Ed.M., Injury Prevention Services Coordinator/City of Allentown Bureau of Health/435 Hamilton Street/Allentown, PA 18101/(215) 437-7598.

First in the Nation: The New York Experience

by Patricia B. Adduci, M.Ed.

In June 1984, the New York State Legislature passed and, in July 1984, Governor Mario M. Cuomo signed the nation's first mandatory seat belt law. The law required anyone riding in the front seat of an automobile to wear a seat belt. All back seat passengers under the age of 10 were also required to buckle up. An already existing law required that children under 4 years old ride in a federally approved car seat. This unprecedented legislation was a giant step for highway safety, not only for New York State, but for the nation.

The primary cause of death and injury for Americans under age 44 is highway crashes. In 1980, when 2,619 people died on New York's highways (1,582 of whom were vehicle occupants), many serious questions were raised. How many of the crashes that took lives and caused serious injuries were preventable? What steps could be taken to reduce this needless carnage, to avoid tragedies that shatter families? Which alternatives would be most effective?

In 1973, the Department of Motor Vehicles, for the first time, recommended the passage of mandatory seat belt legislation. Bills were introduced in 1973, 1974, and 1975, but each effort failed to win a majority in both houses of the State Legislature.

The State of Tennessee made the first breakthrough in 1978 with its landmark legislation, the Child Protection Act. This paved the way for others, and, in 1981, New York became the sixth state to follow suit. In 1983, a regulation promulgated by the Commissioner of Motor Vehicles required learner's permit holders to wear seat belts. In February 1984, Governor Cuomo signed a law requiring junior and probationary licensees to buckle up. And finally, on December 1, 1984, New York's mandatory seat belt law went into effect.

To help motorists get into the seat belt habit, warnings, rather than citations, were issued to violators of the new law during the first month. New York's mandatory law carries a fine of up to $50 for a first offense and, in contrast to the laws of several other states, allows primary enforcement, whereby a person can be stopped and ticketed solely for not wearing a seat belt. (Some states allow only secondary enforcement, so that violators can be cited for failure to wear a seat belt only if they are stopped for some other traffic violation.)

But simply passing a law is not enough. The public has to be informed. In New York, the Department of Motor Vehicles and the Governor's Traffic Safety Committee (an interagency organization chaired by the Commissioner of Motor Vehicles) were given the responsibility of publicizing the new law. Television and radio spots were prepared. Highway signs were designed; bumper stickers were handed out; a poster contest allowed school children to participate. A series of news conferences were scheduled, and officials barnstormed across the state, delivering the message.

Several large employers, both government and private, promoted the law by instituting seat belt policies for their employees. A grant program to support local public information and enforcement efforts was established by the Governor's Traffic Safety Committee. Ongoing contacts with the state's police agencies have stressed the importance of enforcement.

How are we doing? Initial surveys showed that, before the law took effect, only 12 to 16 percent of all New Yorkers buckled up, in spite of numerous informational campaigns through the years. In January 1985, the compliance rate reached a high of 69 percent. Usage initially declined to 46 percent. At the present, over half of our citizens are complying with the law. This is both encouraging and disappointing. It is encouraging because the number of New Yorkers consistently using seat belts has increased four fold since Governor Cuomo signed the new law. It is discouraging because too many of our citizens are not yet "in the habit", despite the fact that some 45,000 tickets were issued in 1985.

Even so, many lives have been saved and many serious injuries have been prevented by the law. During the first 9 months of our mandatory seat belt law, 165 lives were saved. Compared with the previous 5-year average for the same time period, this represents a 17 percent decrease in occupant fatalities. During the same time period, fatalities increased nationally by 4.3 percent. There were no significant changes in drunk-driving laws or speed limits in New York during this time, and miles traveled increased statewide by 1.5 billion. The number of vehicle registrations did not change significantly, and the total number of crashes rose 4.2 percent. However, head injuries, the most serious and costly of all injuries, decreased 17.3 percent. All of these factors lead to the conclusion that wearing a seat belt in an automobile makes the ride immeasurably safer.

Some still insist, however, that being required to wear a seat belt is an unreasonable infringement upon individual rights, a complaint not to be taken lightly in a society where personal freedom is precious. Two court challenges were filed in town courts, one of which eventually moved to the State Supreme Court. We welcomed these challenges because we knew they would clarify the law and complete the democratic cycle of checks and balances.

In both cases, the statute was clearly upheld in language all could understand. The Supreme Court explained: ". . . .Death on the highway can no longer be considered as a personal and individual tragedy alone. The mounting carnage has long since reached proportions of a public disaster. . . .The cost to society of the results of death or severe injuries (resulting from auto crashes) is enormous. The long term care, often extending to the lifetime care, of paraplegics, quadriplegics and patients on life support systems devolves on the state. . .a very large percentage of

(See **First in the Nation,** page 7)

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those persons will never return to a normal life or be able to work, and the cost to this nation is over $15 billion annually. . . .The Court finds that the New York State mandatory 'seat belt law' is a valid constitutional exercise of legislative power."[1]

It is important to remember that driving is not an inalienable right, but a privilege granted to those judged qualified. Clearly, government has the right, indeed the obligation, to install traffic lights and stop signs and to impose speed limits and other rules of the road for everyones's safety. Seat belt use is no exception.

Most New Yorkers support the seat belt law. According to a poll taken by the Institute for Traffic Safety Management and Research in September, 1985, 70.7 percent of the population approves of the mandatory law. And time and again, New Yorkers write to the Governor with stories such as ". . . .The accident was very bad, and would most likely have been fatal for my sister if she had not been wearing her seat belt. . .I know that before the law was enforced, my sister as well as myself very seldom wore our seat belts. (After) the law went into effect, we never started the car until we put our seat belts on. . . .We are all grateful to you, Governor Cuomo, for mandating the use of seat belts."

What, then, of the future? Our public information campaign will continue, with new enthusiasm and resolve. We must continue to educate all New Yorkers, particularly our children, who will become the next generation of drivers. Why? In 1984, 1,198 occupants of motor vehicles died on New York's highways—384 fewer than in 1980, but 1,198 more than our goal. Even one highway death is too many.

For further information, contact Patricia B. Adduci, M.Ed./State of New York Department of Motor Vehicles/ Empire State Plaza/Albany, New York 12228/(518) 474-0841.

FOOTNOTES

[1]Wayne Wells, plaintiff, against the State of New York and Marrio Cuomo, defendant. Supreme Court of the State of New York, County of Steuben, Index 5516, p. 13.

Seat Belt Use Laws

by Kenneth R. Williams

Health educators should have a special interest in seat belt legislation. First, they should be encouraging enactment of mandatory seat belt use laws as an effective way to prevent unnecessary injury and death. In addition, health educators have a vital role to play in developing and implementing the educational programs mandated by the federal regulations and all the state seat belt use laws enacted to date.

During the past decade local, state, and federal agencies have developed a variety of programs to reduce deaths and injuries associated with traffic crashes. The adoption of the 55 mile-per-hour speed limit and the tightening of drunk-driving laws have reduced fatalities. However much more can be done. Recent efforts have focused on mandatory installation of passive protection systems in automobiles and/or the enactment of mandatory seat belt use laws. In 1984, the Department of Transportation (DOT) promulgated rules requiring that automatic occupant-protection systems be phased in beginning with the 1987 model year. All automobiles produced after September 1, 1989, will have to be so equipped unless states representing two-thirds of the nation's population adopt mandatory seat belt use laws meeting DOT criteria (see table), in which case the Secretary of Transportation may rescind the requirement.

In 1984, New York and New Jersey became the first states to enact mandatory seat belt use laws. In 1985, the Centers for Disease Control began using materials provided by the Commerce Clearing House Inc. (Chicago, Illinois) to track state legislative activities dealing with this subject.

Nearly every state introduced or enacted seat belt legislation in 1985 and 1986 (Figure 1). Fourteen states (California, Connecticut, Hawaii, Illinois, Indiana, Louisiana, Massachusetts, Michigan, Missouri, Nebraska, New Mexico, North Carolina, Oklahoma, and Texas) enacted mandatory seat belt use laws during 1985, and 10 states (Florida, Idaho, Iowa, Kansas, Maryland, Minnesota, Ohio, Tennesee, Utah, and Washington) have enacted such laws in 1986. Other states are expected to follow suite during the 1986-1987 legislative term. New York's seat belt use law took effect December 1, 1984. Seat belt laws took effect in 8 states (Hawaii, Illinois, Massachusetts, Michigan, Nebraska, New Jersey, North Carolina, and Texas) during 1985 and in 14 states (California, Connecticut, Florida, Idaho, Iowa, Kansas, Louisiana, Maryland, Minnesota, New Mexico, Ohio, Tennessee, Utah, and Washington) during 1986. Oklahoma's law will go into effect on February 1, 1987, and Indiana's and Missouri's, on July 1, 1987. In addition, Nevada enacted a law requiring use of seat belts if the Federal Government permits the speed limit to be raised to 70 miles-per-hour.

U.S. Department of Transportation
Criteria for Mandatory
Seat Belt Laws

The laws must:

1. Require that front seat occupants of a passenger car have seat belts properly fastened when the vehicle is moving forward. The center seat is exempt. Only medical waivers are permitted.
2. Levy at least a $25 penalty for each occupant in violation.
3. Provide that violation of the law may be used to mitigate damages when violator is in a collision and seeks to recover damages.
4. Provide a program to encourage compliance.
5. Become effective no later that September 1, 1989.

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There is considerable variety among the laws. All except one of the laws enacted to date require seat belt use by front seat occupants (a minimum requirement of the DOT regulations) Oregon enacted a law that requires only occupants under age 16 to wear seat belts. Three states (California, Massachusetts, and New Mexico) went beyond the minimum front seat occupant requirement. California's and Massachusett's laws require that all occupants wear seat belts. New Mexico enacted a front seat occupant law and a separate law requiring that all occupants under 11 years of age wear seat belts. Fines range from $10 to $50. Some states permit primary enforcement, whereby violators can be stopped and cited solely for failure to use seat belts. Other states require secondary enforcement, whereby violators can be cited only if they have been stopped for some other violation.

Many of the laws do not meet the current requirements of the DOT regulations. Several laws contain language prohibiting the Secretary of Transportation from counting their states as part of the two-thirds majority required to allow rescindment of the automatic occupant-protection system requirements. California's law, for example, states that it "...is intended to be compatible with support for federal safety standards requiring automatic crash protection systems and should not be used in any manner to rescind federal requirements for installation of automatic restraints in new cars."

Enactment of seat belt laws does not appear to be the end of the debate regarding such laws. Bills to repeal seat belt use laws were introduced in New York, New Jersey, and Illinois during the 1985 legislative sessions. In Nebraska, opponents have managed to require a referendum on the law in November, 1986. Also, seat belt laws have been challenged in several states. In each case, the courts have held that the laws are constitutional.

States have responded vigorously to the challenge to make our highways safer. Mandatory use laws have been enacted in a majority of states; laws are sure to follow in other states. Debate about the efficacy and the legality of the laws is equally certain to continue. Health educators will follow the debate with interest. ⊕

For further information, contact Kenneth R. Williams, Program Analyst/Office of Program Planning and Evaluation/Office of the Director/Centers for Disease Control/1600 Clifton Road/Bldg. 1, Rm. 2050/Atlanta, GA 30333/(404) 329-3243.

After Mandatory Use Laws: Future Approaches to Decreasing Highway Fatalities

by Brian O'Neill

In recent years, motor vehicle crashes have caused 44,000 to 53,000 deaths and millions of injuries annually. No single approach will reduce these figures—we need a range of programs focusing on people, vehicles, and the physical and social environment. Unfortunately, solutions to motor vehicle crash fatalities and injuries often are not sought this way. All too frequently, policymakers advocate a single solution, usually untested, as *the* answer. This is especially true for legal countermeasures. Laws are passed, often with much fanfare, but there is little or no followup to make them successful.

There is a danger of this happening once again. After more than a decade of unsuccessful efforts, mandatory belt use laws have become a reality in much of the United States. We've been a good deal slower than much of the industrialized world in this area. The first belt use law was enacted in Victoria, Australia, in 1970. Since then the rest of Australia, New Zealand, most European countries, and most Canadian provinces have passed seat belt laws.

At present, 26 states and the District of Columbia have passed laws requiring motor vehicle occupants to wear their belts; these laws are already in effect in 24 of these states and in the District of Columbia. More states are expected to pass mandatory use laws this year.

As encouraging as this legislation is, it is important to realize that a belt use law by itself is not sufficient. Experience from around the world has repeatedly demonstrated that three basic ingredients are necessary for these laws to successfully reduce deaths and injuries: first, cars must have good belt systems; second, legislation must be simple and clear; and third, publicity and enforcement must be continuous.

Most cars in the U.S. have three-point inertia reel belt systems in the front outboard seating positions, and these systems are generally comfortable and convenient to use. However, poorly located upper belt anchor points make some shoulder belt designs uncomfortable for many people. To overcome this, some manufacturers offer "comfort features" that allow shoulder belts to be worn loosely. While this may improve the belts' comfort, such features can seriously limit their effectiveness in crashes. There is still a very real need to improve the comfort and convenience of many belt systems without compromising their effectiveness.

How simple and clear are U.S. seat belt laws? Not surprisingly, they vary widely. In many states they are straightforward, but in others they can only be enforced in conjunction with another traffic offense. This latter situation, often referred to as secondary enforcement, suggests that

(See **After Mandatory Use Laws**, page 9)

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the legislators were not particularly serious about the law when they passed it.

And what about continuous publicity and enforcement? These are unquestionably essential if a belt law is to be successful. The level of enforcement, per se, may not be as important as the perception of enforcement, and there is convincing evidence that this perception can be created by a combination of actual enforcement and publicity.

The early experience in the U.S. is not encouraging with regard to publicity and enforcement. In states where seat belt use laws have been in effect for some time, the typical pattern of behavior has been a substantial increase in belt use immediately after implementation of the law, followed by declining use over time as enforcement and publicity wane. A demonstration program recently sponsored by the Insurance Institute for Highway Safety in Elmira, New York, reinforced the importance of publicity and enforcement efforts. Initially, the belt use rate increased from 50 to 77 percent. After the campaign ended, seat belt use declined to 66 percent—higher than before the campaign, but lower than the initial result.

At present, seat belt use in many of the states with seat belt laws is well below 50 percent and continuing to decline. This early experience reinforces what we have already learned from other countries—namely, that passing a seat belt law is, by itself, not a sufficient answer to the problem of crash deaths and injuries. (This is also true for many other traffic laws, including drunk driving laws and speed limits. For laws to work, the public must believe that they are necessary and that they are being enforced.)

Clearly, passing seat belt use laws is only the beginning. How successful these laws are will depend upon public officials and other responsible people in each state. Significant reductions in deaths and injuries can be expected *only* if the laws are enforced and publicized. When this is done, deaths and serious injuries to vehicle occupants covered by the laws could be reduced by 10 to 20 percent. Although bigger reductions may have been promised, they are unlikely to materialize because, even with vigorous enforcement and publicity, belt use laws do not produce 100 percent use levels. In most countries with successful laws, 20 to 30 percent of the motorists continue *not* to wear belts, and this group has a higher-than-average risk of crash involvement. This means that the benefits we can expect from increasing belt usage from, say, 10 to 40 percent are much less than could be expected from increasing belt use from 60 to 90 percent. This effect dilutes the benefits of the laws, especially when only limited increases in use result.

Based on the experience with belt laws around the world, it is unreasonable to expect more than a 10 to 20 percent reduction in occupant deaths. So far the response to such laws in the U.S. has *not* been as good as in other countries, so even a 10 percent reduction may not be achieved.

It is important to remember that seat belts, when worn correctly, reduce the likelihood of serious injury in a crash by between 40 to 50 percent. They will not prevent *all* deaths and injuries. Future gains will depend on improved restraint systems. The most obvious of these is the seat belt and air bag combination, which is the most effective restraint system yet devised. An air bag prevents many of the injuries (especially those to the head and face) that are sustained by belted occupants in moderate to high speed frontal crashes. In addition, the air bag provides excellent protection in frontal crashes for people who do not wear their belts. In the next few years, virtually every automobile manufacturer will be offering air bags as either optional or standard equipment in at least some of their cars.

While the passage of seat belt use laws in the United States is a beginning, much more work will have to be done to make these laws effective. Unfortunately, there is little evidence that sufficient effort is being made at the present time. In addition, although it is true that improved restraint systems such as air bag and seat belt combinations hold the promise of further reductions in occupant deaths and injuries, this will not happen unless such systems are introduced in significant numbers.

For further information, contact Brian O'Neill, President/ Insurance Institute for Highway Safety/Watergate 600/Washington, DC 20037/(202) 333-0770.

Developing Occupant Protection Programs

by Andrea Biddle, M.P.H.

According to the National Highway Traffic Safety Administration, there are five primary methods for increasing safety belt and child safety seat use. They are *legislation*, *educational programs* promoting safety belt and safety seat usage, *organizational policies* requiring employees to buckle up on official business trips, programs offering *incentives* for safety belt and child safety seat use, and *public information (mass media) campaigns.*

While it helps to know what methods will be effective in a comprehensive occupant protection program, this information alone is not enough. Health educators need teaching materials as well as technical assistance in planning programs, and these are sometimes hard to find. This article describes five major resources that will make the educator's job a little easier. In addition to the agencies highlighted here, the highway safety agency in each state and the regional offices of the National Highway Traffic Safety Administration are excellent sources of information.

Center for Health Promotion and Education
Centers for Disease Control

The Center for Health Promotion and Education, Centers for Disease Control, produces the Health Education subfile

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of the Combined Health Information Database (CHID). The subfile contains journal articles, monographs, reports, curricula, unpublished documents, and descriptions of programs for both child passenger safety and safety belt issues. The subfile is updated quarterly. For further information, contact Priscilla Holman, Educational Resources Branch, Center for Health Promotion and Education, Centers for Disease Control, 1600 Clifton Road, NE., Atlanta, GA 30333; (404) 329-3492.

National Highway Traffic Safety Administration

NHTSA's Office of Occupant Protection works with state highway safety offices and NHTSA regional offices, private employers, and various national organizations to promote occupant protection. NHTSA's National Center for Statistical Analysis collects injury and fatality data to be used in identifying problems and planning and evaluating programs. They have produced various educational materials including a particularly useful publication entitled *How to Plan a Comprehensive Occupant Protection Program* (DOT HS 806-561), available from the National Technical Information Service. This document outlines the basic steps in developing an occupant protection program. Although it focuses on community-level programs, the information is equally applicable at the state level. To obtain further information, contact Marilena Amoni, National Highway Traffic Safety Administration, Office of Occupant Protection, NTS-11, 400 Seventh Street, SW., Washington, DC 20590; (202) 426-9294.

National Safety Council

Several types of materials and technical assistance are available from the National Safety Council. *Accident Facts*, an annual publication, provides safety statistics for various types of injuries and counter measures, including motor vehicle crashes and safety belt and child safety seat use. The Council has conducted safety belt education and incentive programs with various companies in the United States. It also offers educational materials to assist employers, schools, community organizations, and other groups in developing occupant restraint programs. Further information and materials may be obtained from Barbara Richardson, Occupant Protection Programs, National Safety Council, 444 North Michigan Avenue, Chicago, IL 60611; (312) 527-4800.

University of Michigan
Transportation Research Institute

The Public Information Materials Center of the the University of Michigan Transportation Research Institute annually compiles the Occupant Protection Public Information Materials Catalog (DOT HS 806-801), available from the National Technical Information Service. The catalog lists printed materials, television and radio materials, and movies and audiovisual presentations produced for adult and child occupant protection campaigns along with journal articles and reports describing and evaluating such programs. All materials and reports listed in this document are available for loan, free of charge. To borrow materials, contact Ann Grimm, University of Michigan, Transportation Research Institute, Public Information Materials Center, Ann Arbor, MI 48109-2150.

University of North Carolina
Highway Safety Research Center

The Highway Safety Research Center conducts research in child passenger safety and adult occupant protection. Educational materials and catalogs of audiovisual materials as well as reports on incentive and educational programs are available from the Center on a short-term loan basis. For more information, contact Ann Woodward, University of North Carolina, Highway Safety Research Center, Craige Trailer Park - 197A, Chapel Hill, NC 27514; (919) 962-8703.

For further information, contact Andrea Biddle, M.P.H./ Center for Rand-UCLA Health Policy Studies/Rand Corporation/P.O. Box 2138/Santa Monica, CA 90406-2138/ (213) 393-0411.

NTSB-NHTSA Lap Belt Controversy

EDITORIAL NOTE: In early August 1986, the National Transportation Safety Board (NTSB) released a report on the effectiveness of rear-seat lap belts in selected frontal crashes. Based on their study of 26 cases, NTSB concluded, among other things, that: "In frontal collisions, persons using lap-only belts may not be adequately protected against injury and may sustain additional injuries, induced by the lap belt itself."

The NTSB conclusion, widely publicized by the mass media, triggered a national wave of controversy and confusion around the question: Are safety belts *really* safe? That such a question is posed at all creates great concern for public health and safety workers whose efforts to promote the use of seat belts has been based on research findings that warrant such advocacy. A manifestation of that concern has been expressed by the National Highway Traffic Safety Administration (NHTSA) in a formal reaction to the NTSB study report.

This controversy has unearthed some important research and education questions about which many of us have become a bit too complacent. Because of the timeliness and salience of this issue for all health promotion and disease prevention workers, *Focal Points* has decided to publish excerpts from the NTSB report and the NHTSA reaction. These excerpts appear below. Readers should keep in mind that both NHTSA and NTSB are part of the

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Federal Government. NHTSA is an adminstrative unit in the Department of Transportation and is responsible for administering the Federal Government's auto safety programs, including safety standards and vehicle recalls, and for working with the states to improve traffic law enforcement and encourage safe driving practices. The NTSB is an independent federal agency that investigates vehicle crashes and makes recommendations to the Department of Transportation.

Excerpts of the National Transportation Safety Board Report

(Submitted to the Department of Transportation, August 8, 1986, by Patricia A. Goldman, Acting Chairman, NTSB)

. . . .In the fall of 1984, the Safety Board embarked on a program to investigate approximately 200 crashes in which the crash performance of seat belts would be thoroughly examined. A careful examination of the case vehicle was carried out in each crash investigation, documenting its "vital statistics" and information about the restraint system available to each occupant. The size, weight, and seating location of each occupant was determined. For each occupant, the investigator determined whether the available seat belt was used, whether it was used correctly, the nature and severity of each injury sustained (expressed in terms of the Abbreviated Injury Scale), and the probable source of each injury. Necessary measurements were made that permitted the Safety Board to estimate the collision severity in terms of the velocity change ("Delta V") experienced by the case vehicle. Based on these data, an analysis could be made of the performance of each belt system in use during the crash, and some overall conclusions drawn about the role of belt restraint systems in the crashes studied.

After about a quarter of the investigations had been initiated, several cases involving lap belted rear seat occupants began to draw the Safety Board's attention to these belt systems in particular. . . .

In all, the Safety Board was notified of 26 accident cases involving lap belt restrained occupants that also met the other notification criteria established for the program. The Board has issued a report of its findings on the performance of the seat belts used in these 26 cases—50 lap-only belts, 32 lap/shoulder belts—and on the experience of the 57 unrestrained occupants in these cases and in 3 other cases involving only unrestrained occupants, studied for comparison purposes. In addition, one case involving front and rear seat occupants, all using lap/shoulder belts, was studied, again for purposes of comparison.[1]

It is important to remember that this study is limited in two important respects. First, the crashes examined (with one exception) were all frontal crashes. Results derived from analysis of frontal collisions cannot be applied to other crash configurations. The benefits that may be derived from lap belt use (compared to no restraint) in minimizing the possibility of ejection during rollover or side impact cannot be discovered through analyzing frontal collisions. Second, the small size of the sample in this study means that no statistically valid conclusions can be drawn from it. . . .

The Safety Board concluded that, overall, the crash performance of the lap belts in the 26 cases investigated was very poor. Among the 50 persons using a lap-only belt, the Board determined that at least 32 of them would have fared substantially better if they had been wearing a lap/shoulder belt. In many cases, the lap belts induced severe to fatal injuries that probably would not have occurred if the lap belts had not been worn. The occurrence of lap belt induced severe to fatal injuries was not limited to severe crashes: 14 lap belted occupants sustained belt induced injuries of AIS 3 or greater severity (including 6 fatally injured) in crashes of Delta V 28 mph or lower. Even correctly[2] worn lap belts induced severe injury: 24 occupants who received AIS 3 or greater injuries from the belt itself are believed to have been wearing it correctly. Twenty-six of the lap belted occupants sustained serious to fatal injuries in crashes in which other occupants—either unrestrained or lap/shoulder belted, and often seated in the more vulnerable front seating locations—were less seriously injured or not injured at all. The injuries characteristically induced by the lap belt were among the most dangerous types of injuries: those to the head, spine,[3] and abdomen. The ages of lap belt injured persons ranged from 4 to 82 years (more than half were younger than 15 years, however) and included both males and females. Finally, the post-crash medical handling of several of the lap belt injury victims demonstrated the need for improved understanding by medical personnel of the possibility and gravity of seat belt induced injuries in motor vehicle crashes.

The Safety Board is aware that the cases investigated in its project are not representative of the range of real-world accidents and, therefore, the findings are not necessarily representative of overall lap belt performance. That is, it may be that if sufficient, accurate data were available on lap belt performance in crashes, it would be shown that lap belts reduce crash losses to a greater extent than they increase them. Unfortunately, the data needed to make such a showing are not available. . . .

Based on the information collected by the Safety Board in its special crash investigation program and corollary re-

FOOTNOTES

[1] For more detailed information, read Safety Study—"Performance of Lap Belts in 26 Frontal Crashes" (NTSB/SS-86/03).

[2] There is no officially agreed-upon definition of "correct" lap belt use, but the Safety Board used the term to mean snugly crossing the lower abdomen between the pubis and the umbilicus, with the belt low on the hips below the crest of the ilium. This appears to be the generally accepted meaning.

[3] In this study, lap belt induced head and spine injuries are those brought about by the violent jackknifing motion over the lap belt—injuries that would not have occurred but for the use of the lap belt.

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search, summarized in its report, the Board concluded the following:

- In frontal collisions, persons using lap-only belts may not be adequately protected against injury and may sustain additional injuries, induced by the lap belt itself.
- Lap belts may induce injury, ranging in severity from minor to fatal, to the head; spine; abdomen; intra-abdominal viscera, connecting tissue, and blood vessels; and intra-thoracic viscera, connecting tissue, and blood vessels. Such injuries may occur singly or in combination.
- The types of injuries induced by lap belts can be difficult to diagnose, particularly if attending medical personnel are unfamiliar with the symptoms or are unaware that serious injury can be belt induced; in some cases, symptoms of belt induced injury may not become apparent for some time. Inadequate medical treatment may also occur if attending medical personnel have been misinformed about the patient's use or nonuse of a belt system, about the type of belt system used, about whether the patient was ejected during the crash, or about other important facts of the crash.
- The gravity of typical lap belt induced injuries is such that if appropriate treatment is not provided quickly, serious irreversible consequences, including death, may result; some physicians advise that medical personnel attending a motor vehicle crash victim should suspect serious injury has occurred, particularly if lap belt use is known or suspected, and to act quickly to explore this possibility and begin appropriate treatment.
- Because of a variety of weaknesses in available accident databases, it is not possible to determine the overall effectiveness of lap belts in preventing fatalities and reducing injury; the Safety Board is unable to state with confidence whether passenger vehicle occupants should be advised to use rear seat lap belts or not.
- The relative inadequacy of lap belts to provide crash protection, and their ability to induce serious injury, have been known for many years to researchers, some parts of the medical profession, and to others concerned with occupant crash protection.
- Lap/shoulder belts provide superior crash protection to that of lap belts alone, and present a significantly lesser risk of induced injury; such systems appear to work effectively even for children, and they can be used with child safety seats and booster seats.
- The U.S. Federal Motor Vehicle Safety Standards have required since the early 1970's that front outboard seating positions in passenger vehicles be fitted with 3-point lap/shoulder belts; however, all other seating locations may be fitted with a lap-only belt.
- Most manufacturers have not provided 3-point lap/shoulder belts at any seating location except the front outboard, where they are required.
- Since the early 1970's, the U.S. Federal Motor Vehicle Safety Standards have required that anchor locations for the after-market installation of detachable shoulder belts be provided at the rear outboard seating locations of passenger cars. However, few manufacturers note this fact in the owner's manuals for their cars and it is unlikely that many car owners are aware of it. So far as the Board could determine, only General Motors sells a detachable shoulder belt that could be fitted at the anchor locations.
- Several countries require that 3-point lap/shoulder belts be provided at rear outboard seating locations; several foreign manufacturers provide such systems even in vehicles manufactured for sale in the United States.

Given the known deficiencies of lap-only belt systems and the superior crash protection offered by belt systems that incorporate an upper torso restraint, the Safety Board believes that government and industry should take a number of steps to reduce reliance on lap belts and increase the availability of lap/shoulder belt systems. The implementation of State mandatory belt use laws will inevitably increase pressure for more widespread use of belt systems in other than front seat locations. Indeed, at this writing, two States have passed laws that require all passenger vehicle occupants to wear the belts available to them; three more States require children to use belts in the rear seats (and some State laws on use of child restraint devices permit the alternative use of lap belts). . . .

As a result of this safety study, the National Transportation Safety Board recommends that the National Highway Traffic Safety Administration:

Encourage manufacturers of passenger vehicles to provide aftermarket retrofit assemblies to convert lap-only belt systems at outboard positions to integrated, continuous loop, self-storing lap/shoulder belt systems; urge manufacturers to make the availability of these retrofit systems widely known to vehicle owners and installation of them as simple and inexpensive as possible. (Class I, Urgent Action) (H-86-44)

Require that lap/shoulder belts be installed at all outboard seating positions in newly manufactured passenger vehicles manufactured for sale in the United States; initiate rulemaking action to this end immediately. (Class I, Urgent Action) (H-86-45).

Until such time as they are required to do so, encourage manufacturers of passenger vehicles to provide, on a voluntary basis in newly manufactured vehicles, in-

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tegrated, continuous loop, self-storing lap/shoulder belts in all non-front outboard seating positions. (Class II, Priority Action) (H-86-46).

Determine the feasibility of requiring that 3-point lap/shoulder belts be provided at every seating position in newly manufactured passenger vehicles manufactured for sale in the United States; if found technically feasible, undertake rulemaking to require such lap/shoulder belts. (Class II, Priority Action) (H-86-47).

For further information, contact Dr. Barry Sweedler, Director/Bureau of Safety Programs/National Transportation Board/Washington, DC 20594/(202) 382-6600.

National Highway Traffic Safety Administration's Reaction

(Statement by Diane K. Steed, Administrator, National Highway Traffic Safety Administration, August 13, 1986)

The National Highway Traffic Safety Administration (NHTSA) is concerned that a recent report on lap belts, issued by another government agency, may mislead and confuse the American motoring public on the benefits of safety belt usage. The report, issued on August 11, 1986, by the National Transportation Safety Board (NTSB), examined the performance of rear-seat lap belts in 26 selected frontal crashes and called into question the safety benefits of those belts. . . .

Areas of Concern

NHTSA is concerned that the Board's study was based on an extremely small (and statistically unreliable) data base, which provides little insight as to the overall benefits of lap belt usage. The NTSB study focused on only one type of vehicle crash (frontal), and thus ignored other types of crashes (side impacts and rollovers) in which belts are especially effective in protecting occupants. Moreover, the NTSB study looked only at injuries that are caused by belts, and thus failed to consider the types of occupant harm (such as ejection) that are prevented by belt usage. The Board's report concedes that the study is limited and "that no statistically valid conclusions can be drawn from it."

NHTSA has compiled five comprehensive studies, all of which indicate that safety belts—including lap belts—are very effective in reducing the risk of death or serious injury in a vehicle crash. These studies are based on large data bases covering thousands of crash reports, rather than on a few isolated reports. These reports clearly indicate that occupants are better protected by wearing safety belts than by traveling unrestrained, in both the front and rear seats of cars, and regardless of the type of belt system used.

For example, one study conducted using data from North Carolina traffic crash data files reviewed crash reports involving more than 200,000 rear seat occupants. That study found that rear seat occupants using lap belts were 41-49 percent more likely to avoid serious injury or death than those who did not use those belts.

Other safety groups agree with NHTSA's position on the value of lap belts. The Insurance Institute for Highway Safety responded to the NTSB study with a statement that motorists are better off with a lap belt than no belt at all.

The Board's study has considerably confused the public discussion of safety belts, and thus may affect efforts to encourage the use of belts and the adoption of safety belt use laws. It is this confusion that most deeply concerns NHTSA, especially since all available evidence supports the safety benefits of belt usage.

Areas of Agreement

While NHTSA disagrees with the implications of the Board's report that lap belts are unsafe, we do agree with several of the Board's observations. First, it comes as no surprise to us and to other safety experts that belts can on occasion cause injury to car occupants. We have never said that safety belts protect people in every conceivable type of crash. But given all of the crash data that we have, the odds are that anyone traveling by car is better off wearing a belt when traveling unprotected. This includes both the front and rear seat, whether the car has lap belts or lap and shoulder belts, whether occupants of the car are adults or children.

Second, we agree with the Board that the study is limited in that it only considered frontal crashes and that 26 cases is far too small a sample from which to draw conclusions. Nevertheless, widespread media coverage of the Board's report has not made this distinction and we are concerned that the public may be given the wrong impression.

Third, we agree that medical personnel should devote specific attention to crash injuries that may be difficult to diagnose—because safety belts are so effective in preventing immediate fatalities and obvious injury. NHTSA has been working closely with the medical community to promote training for emergency medical teams and hospital trauma personnel on detecting "hidden" injuries, and to stress that all persons involved in crashes should be carefully examined. We have worked with the medical community on continuing education in the assessment and management of multiple blunt trauma cases, including training courses for Basic, Prehospital and Advanced Trauma Life Support. NHTSA has also supported efforts to increase public awareness and usage of emergency prehospital services in responding to highway collisions.

Fourth, we agree that lap and shoulder belts provide even greater crash protection than lap belts alone. That is why NHTSA has required lap and shoulder belts in the front seats of automobiles since 1968. We also agree that such belts work effectively for children and that they can be used with child safety seats and booster seats.

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However, that observation does not necessarily lead to the conclusion that lap/shoulder belts should be *required* in the rear seats of all cars. That decision must be based on an analysis of the potential risks to rear seats occupants, and whether lap/shoulder belts would significantly reduce that risk. NHTSA is required by law (the Vehicle Safety Act) to carefully consider the safety need for all of its vehicle regulatory activities. Earlier this year, the agency was petitioned by a child passenger protection group to begin rulemaking on this issue. NHTSA has been reviewing the issue, and we will consider the information in the NTSB report along with our own data in determining whether to grant the petition and begin rulemaking.

Conclusion

NHTSA wants to assure the motoring public that lap belts *are* effective safety devices, which do reduce the risk of death or serious injury in crashes. We continue to urge all occupants, in both front and rear seats, to use their safety belts on every trip.

NHTSA reports that numerous studies conducted both in-house and by other researchers support the agency's stance. For information on these studies or on the report cited here, contact Susan Partyka, Mathematical Statistician/National Highway Traffic Safety Administration/ NRD-31/Room 6125/400 Seventh Street, SW./Washington, DC 20590/(202) 366-5352.

ODPHP Health Information Center

OHIC NEWS

A service of the Office of Disease Prevention and Health Promotion, Public Health Service, U.S. Department of Health and Human Services.

The Office of Disease Prevention and Health Promotion (ODPHP) sponsors the ODPHP Health Information Center (OHIC) as a central source of referral for health questions. The OHIC (formerly the National Health Information Clearinghouse) operates a toll-free number, maintains a database of organizations that provide health information, publishes resource lists, and distributes publications. To contact the OHIC, call (800) 336-4797 (toll-free) or (202) 429-9091 (in the District of Columbia). Or write to the ODPHP/OHIC, P.O. Box 1133, Washington, DC 20013-1133.

Car Safety Resources

The OHIC's health organization database contains several groups that provide information on car safety, specifically safetybelts and car seats. At the federal level, the National Highway Traffic Safety Administration's (NHTSA) task force on car safety publishes a variety of brochures and conducts health promotion programs on the use of safety belts, car seats, and automatic protection. NHTSA also maintains a toll-free hotline ([800] 472-3462) both for consumer complaints on auto safety and child safety seats and for recall information. NHTSA materials may be ordered from: NHTSA, 400 Seventh Street, SW., NTS-13, Washington, D.C. 20590, (202) 366-2703. Among the available resources are:

- Curriculum guides educational kits are designed to be used by teachers. These educational kits contain teaching manuals, posters, stickers, and learning activity worksheets relating to seat belt safety. Four different curriculum guides focus on specific age groups: "Restrain Yourself" and "Beating the Odds" for high school students, "A Safer Way for Everyday" for K-3rd grades, and "We Love You — Buckle Up" for children in general. One free copy may be obtained from NHTSA. To order multiple copies write or call Mazer Corporation, 2501 Neff Rd., Dayton, Ohio 45414, (513) 276-6181. The average price per guide is $2.50, but lower prices are offered for large orders.
- Single and multiple copies of the following pamphlets focusing on seat belts, car seats, and air bag protection are available from NHTSA: "Child Safety Seats for Your Automobile", "The Automobile Safety Belt Fact Book", "Protecting Yourself Automatically", and "Facts About Airbags".
- NHTSA also offers posters and "A Guide to Audiovisual and Print Materials on Safety Belts and Child Safety Seats".

Car safety resource materials are also offered by several private organizations:

- The American Seat Belt Council publishes a packet of materials free of charge which includes a brochure entitled "The Cost of Not Wearing Seat Belts", a poster, and articles on seat belt use. To order this packet, write or call the American Seat Belt Council, 300 Buckelew Ave., P.O. Drawer F, Jamesburg, NJ 08831.
- The American Association of Retired Persons (AARP) has a 20-30 minute slide-tape program entitled "Safe Rides for Long Lives" and complementing hand-out publications. The program provides facts about crashes and saving lives with seat belts and is based on years of traffic accident research and inter-

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views with older persons. This presentation won the Gold Screen Award of the National Association of Government Communications. The program kit may be borrowed free of charge from AARP's program scheduling office at 1909 K Street, NW., Washington, DC 20049, (202) 872-4700. Requests to reserve the film should be made 45 days in advance. It is also available from some AARP Chapters.

- The American Automobile Association Foundation for Traffic Safety offers a variety of car safety materials including a guide to child car seats, children's story books, posters, and stickers at a nominal charge. Local AAA club's public relations/safety offices may be contacted to order these items.

New Publications from the OHIC

Several resources have recently become available through the OHIC. They include:

- *The 1990 Health Objectives for the Nation: A Midcourse Review* assesses the nation's progress in meeting its decade-long strategy to improve health status and reduce health risks by achieving the established 1990 health objectives; graphically displays measureable progress.
- *A Review of State Activities Related to the Public Health Service's Health Promotion and Disease Prevention Objectives for the Nation, a Report to the ODPHP from the Intergovernmental Health Policy Project at George Washington University, March, 1986*, is an executive summary of the first assessment of state-level progress toward the Surgeon General's 1990 Health Objectives for the Nation.
- *Worksite Nutrition: A Decision-Maker's Guide* was developed jointly by the ODPHP, the Society for Nutrition Education, and the American Dietetic Association. It offers examples of the health and economic benefits of worksite nutrition programs and strategies for implementing such a program. It also gives examples of successful programs and lists resources.
- *ODPHP Publications List*, recently updated, lists publications that the ODPHP has sponsored or cosponsored and includes information for the general public, reports and papers for health professionals, proceedings of conferences, and more.

National Health Observances

Health observances are specific months, weeks, and days devoted to the promotion of particular health topics. Program planners may want to consider activities related to one of the selected health observances listed below. Contact the sponsoring organization for helpful, related materials. A complete list of health observances for 1986, one in the *Healthfinder* series of resource lists, is avialable from the OHIC.

OCTOBER

Family Health Month. Director of Communications, American Academy of Family Physicians, 1740 West 92nd St., Kansas City, MO 64114.

National Diabetes Research Month. Juvenile Diabetes Foundation, Executive Office, 60 Madison Ave., New York, NY 10010.

National Family Sexuality Education Month. Planned Parenthood Federation of America, Department of Education: NFSEM, 810 Seventh Ave., New York, NY 10019.

National Spina Bifida Month. Spina Bifida Association of America, 343 South Dearborn St., Suite 310, Chicago, IL 60604.

National Spinal Health Month. Director of Communications, American Chiropractic Association, 1916 Wilson Blvd., Arlington, VA 22201.

Sudden Infant Death Syndrome Awareness Month. National SIDS Foundation, Two Metro Plaza, 8240 Professional PL., Suite 205, Landover, MD 20785.

National Employ the Handicapped Week (October 5-11). President's Committee on Employment of the Handicapped, Washington, DC 20210.

National Fire Prevention Week (October 5-11). National Fire Prevention Association, Batterymarch Park, Quincy, MA 02269.

Child Health Day (October 7). Department of Health and Human Services, Division of Maternal and Child Health Parklawn Bldg., Room 6-05, 5600 Fishers Lane, Rockville, MD 20857.

National Running and Fitness Day (October 12). American Running and Fitness Association, 2420 K St., NW., Washington, DC 20037.

National School Lunch Week (October 12-18). American School Food Service Association, 4101 East Iliff, Denver, CO 80222.

National Disabled Americans Week (October 13-19). Public Relations Director, National Easter Seal Society, 2023 West Ogden, Chicago, IL 60612.

World Food Day (October 16). National Committee for World Food Day, 1001 22nd St., NW., Washington, DC 20437.

National Lupus Awareness Week (October 19-25). Vice-President of Operations, Lupus Foundation of America, 11921-A Olive Blvd., St. Louis, MO 63141.

National Safety on the Streets Week (October 26-November 1). National Safety Council, 444 North Michigan Ave., Chicago, IL 60611.

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